

# 第 45 届

世界技能大赛商务软件解决方案项目

山东省选拔赛技术工作文件

2018 年 1 月

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## 一、命题依据

本次竞赛项目以世界技能大赛商务软件解决方案项目的技术文件和44届世界技能大赛真实竞赛题目为依据。

## 二、竞赛内容与方式

### （一）竞赛内容。

比赛内容基本按照第44届世界技能大赛的第1天和第2天为基础，即：以微软办公软件为框架建构软件解决方案，分析企业要求以创建适合的解决方案，并用解决问题技巧和深入详尽的技术知识组合这些方案。

### （二）竞赛形式。

本竞赛项目，只以现场计算机实操方式进行。

### （三）具备的能力与工作范围。

1) 为解决商务问题开发解决方案。

2) 用 Microsoft SQL Server、Visual Studio、Office 软件作为框架，建立软件解决方案。

3) 分析企业要求以创建适合的解决方案

4) 用解决问题技巧和深入的技术知识建立这些解决方案。

5) 用简洁易懂的方式整理他们的创意方案。

6) 用沟通能力和销售技巧向客户陈述他们的解决方案。

### （四）主要技能要求参考如下

#### 1) 数据库与系统开发

要求参赛者使用 Microsoft SQL Server 和 Visual Studio 的全部功能；并需要懂得数据库设计和系统开发的技巧。

➤ 如何在 .NET 环境下链接数据库

- 如何设计数据库
- 如何进行数据库创建、查询、添加、删除、比较、排序、统计、数据备份、生成报表
- 选手必须能够：
- 导入数据信息
- 创建、修改创建、查询、添加、删除、比较、排序、统计数据库
- 数据备份、生成报表
- 打印数据报表

## 2) 电子制表软件

要求参赛者使用 Microsoft Excel 的全部功能；但不需要有特定领域（如金融，工程，数学，统计等）的深入的专业知识。

- 构建电子表格
- 使用设计和分析工具
- 使用数据和表函数
- 应用程序之间的数据共享
- 打印电子数据表
- 图表和图形
- 使用多个工作簿
- 使用审核功能

## 3) 文件处理

参赛者将要求使用 Microsoft Word 的所有功能。内置拼写检查和同义词词典功能将不测试。

- 创建文档
- 邮件合并
- 引用
- 在应用程序中共享数据

### (五) 评分标准

比赛各部分内容的参考分值权重如下表：

Section 部分	Criterion 标准	分值权重
A	Database design and construction 数据库设计和建造	56%
B	Spreadsheet modelling 电子表格模型	18%
C	Document design and production 档案设计和生成	26%
	Total =	100%

## 三、竞赛评分方法及环境要求

本竞赛方案以 World Skills Competition（世界技能大赛）“商务软件解决方案”项目赛事标准为基础依据；竞赛内容包括：使用 Microsoft Office 软件包工具，建立和提供商务工作上问题的解决方案。

### (一) 成绩评定方法

- 1、参赛选手的成绩评定由裁判组负责。
- 2、操作技能竞赛依据赛场记录，由现场裁判组集体评判成绩。
- 3、决赛时所有参赛选手在同一赛场进行比赛。参赛选手的最终名次

依据成绩排定。当出现成绩相同时，由竞赛工作小组根据仲裁意见决定名次。

## （二）竞赛设备

操作技能竞赛在标准机房进行。

### 1、软件环境如下：

- 工作站操作系统：Windows 7(64 位) 英文版；
- 输入法
  - ✓ 简体（系统自带的拼音, 五笔）
- SQL Server 2012（英文版）
- Visual Studio 2013（英文版）
- MS Office 2013（英文版）
  - ✓ Word
  - ✓ Excel
  - ✓ Power Point

以上软件均不提供原介质包以外的第三方插件。

### 2、硬件环境如下：

赛场提供 1 台服务器和满足赛场选手数的交换机作为赛场的公共交换机（2 台 24 口或 1 台 48 口的交换机），每个选手提供 1 台计算机。赛场使用网线形成星型网络，要求网线一端连接赛场的公共交换机，另一端连通各竞赛选手的工位（IP 地址比赛前提供）。裁判用评委机接入该局域网内评改各选手的作品。

服务器参数：

- 处理器：64 位四核 Intel（R）至强处理器以上；

- 内存：4G 以上；
- 硬盘：100G 以上预留空间；
- 局域网网络：100M；
- 操作系统：2003 SERVER；

选手计算机参数：

- 处理器：Intel (R) Core i3 以上；
- 内存：4G 以上；
- 硬盘：80G 以上预留空间给选手使用；
- 操作系统：Windows 7(64 位) **英文版**；
- 局域网网络：100M；
- 含耳机；

#### 四、竞赛规则

##### (一) 竞赛现场规定。

1. 参赛选手必须持本人身份证并携（佩）戴组委会签发的参赛证件参加竞赛。

2. 参赛选手必须按决赛时间，提前 15 分钟检录进入赛场。并按指定座位号、机位号参加比赛。迟到 30 分钟者不得参加竞赛。在比赛开始 30 分钟后方可离开赛场。

3. 参赛选手应严格遵守赛场纪律，除携带竞赛必备的用具（如笔、尺、各种彩色颜料等）外，比赛不可将有关素材带入比赛现场；所有通讯工具一律不得带入比赛现场。

4. 选手在比赛过程中不得擅自离开赛场，如有特殊情况，需经裁判人员同意后作特殊处理。

5. 参赛选手在比赛过程中，如遇问题需举手向裁判人员提问，选手之间如互相询问则按作弊行为处理。

6. 在比赛规定时间结束时应立即停止答题或操作，不得以任何理由拖延比赛时间。

7. 由于停电等不可抗拒因素影响工作时，参赛者提出，经裁判长核实情况后裁决。

8. 竞赛过程中，允许参赛者饮水、上洗手间，其耗时一律计算在竞赛时间内。

9. 参赛者在竞赛过程中如发现问题，应立即向监考裁判反映，得到监考裁判同意方可暂停竞赛，否则竞赛时间照计。

10. 竞赛过程中，监考裁判应对每名参赛者的各道工序认真填写竞赛监考记录。

11. 监考裁判及赛场工作人员与参赛者只能进行有关工作方面的必要联系，不得进行任何提示性交谈。其他允许进入赛场的人员，一律不允许与参赛者交谈。任何在竞赛现场的人员，不得干扰参赛者的正常操作。

12. 操作完成时，参赛者应举手示意监考裁判记录其竞赛实际时间。

13. 竞赛过程中，参赛选手须严格遵守安全操作规程及劳动保护要求，接受裁判员、现场技术服务人员的监督和警示，确保设备及人身安全。

## （二）技能操作竞赛规定。

1. 参赛选手的设计作品应确保无版权争议，参赛选手如果侵权，一经查实，则取消该选手成绩。

2. 参赛作品如涉及版权或专利注册等法律问题，一切由本人负责，主承办机构概不负责。



3. 选手参加比赛前，须按组委会指定时间熟悉比赛场地和设备情况。
4. 大赛试题在大赛现场统一发放，选手在试卷上规定位置填写准考证号，其他位置不能有任何暗示选手身份的记号或符号，否则取消成绩。
5. 须按要求保存文件，如没有原始文件，则取消成绩。
6. 如果选手提前结束比赛，应举手向裁判员示意提前结束，比赛终止时间由裁判员记录在案，选手提前结束比赛后不得再进行任何操作。
7. 提交作品，选手提交作品时，须在登记簿上确认签字，以便检验和评分。
8. 本次竞赛获奖作品的设计使用权、设计版权、制作版权归组委会所有。
9. 选手在竞赛期间未经组委会的批准不得接受其他单位和个人进行的与竞赛内容相关的采访。
10. 选手不得将竞赛的相关情况资料私自公布。
11. 参赛选手在竞赛过程中必须主动配合裁判的工作，完全服从裁判安排，如果对竞赛的裁决有异议，请以书面形式向组委会专家组提出申诉。

附件 1:

第 45 届  
世界技能大赛山东省选拔赛  
商务软件解决方案样题

# Session 1

## 第 1 阶段

### INTRODUCTION

#### 介绍

In this session, you will be starting the development of **Skills Competition Management System 2016** application and its database. You have been provided with some system documentation so that you can build the system according to the needs. Take time to look through what has been provided.

在本阶段，你将为 “2018 中国技能大赛管理系统” 开发应用程序和数据库。现已提供给你一些系统文档以便你能够根据需求来开发系统。你需要仔细阅读提供给你的资料。

### INSTRUCTIONS TO THE COMPETITOR

#### 对选手的说明

By the end of this session, you will need to have the following deliverables ready to submit so that the system will be finished on time.

在本阶段结束时，你需要交付以下可交付成果，以便所开发的系统能够按时完成。

Make sure that you follow the provided style guide throughout all parts of the system.

确保在整个系统开发中都遵循风格指引。

Make sure that you provide appropriate validation and error messages throughout all parts of the system.

确保在整个系统开发中提供合适的验证和错误提示信息。

Make sure that all relevant buttons/links are working at the end of the session.

确保在本阶段末时，所有相关的按钮/链接都运转正常。

Make sure that you use appropriate naming conventions for all parts of the system

as needed.

确保在整个系统中都按照需要来使用合适的命名规范。

## **DELIVERABLES (SESSION 1)**

### **可交付成果 ( 第一阶段 )**

#### **1.1 USE CASE DIAGRAM DESIGN**

##### **用例图设计**

#### **USE CASE DIAGRAM DESIGN**

##### **用例图设计**

The Business Description about Shanghai Travel Agency is provided in the materials. You are required to analyze the system functions according to that introduction, and design the Use Case Diagram.

素材文件中提供了上海 SH 旅行社的业务描述。请你根据业务描述 ,分析系统功能 ,并绘制用例图。

#### **1.2 DATABASE DESIGN**

##### **数据库设计**

#### **DATABASE DESIGN**

##### **数据库设计**

You need to design a database for the system used by SH Travel Agency. You do not need to develop that system. All you need to do is to provide ERD-Database Diagram and Data Dictionary.

你需要为 SH 旅行社使用的系统去设计数据库。你不需要开发该系统 ,你只需要提供实体关系图 ( ERD - database diagram ) 和数据字典。

The business and data requirements of SH Travel Agency are provided in the materials. Please analyze carefully to find out the entities in them and the relationship between those entities. You may need to add some entities, properties or relationship to ensure the database design is conventional. Refer to the templates of ER Diagram (ERD-SH.pdf) and the Data Dictionary

(DataDictionary.docx) provided in the materials for the design of ER Diagram and the corresponding data dictionary.

素材文件提供了 SH 旅行社的业务和数据需求，请你仔细分析，找出其中的实体并分析它们之间的关系。你可能需要补充一些实体、属性或关系来保证数据库设计的规范化。参照素材文件提供的 ER 图 ( ERD-SH.pdf ) 与数据字典 ( DataDictionary.docx ) 模板，绘制 ER 图并设计与之配套的数据字典。

### 1.3 CREATE DATABASE AND IMPORT DATA

#### 创建数据库和导入数据

#### CREATE DATABASE AND IMPORT DATA

##### 创建数据库和导入数据

At first, you need to create a database using MSSQL Server with the name “SHTourismManagement” . Create data tables according to the data dictionary in the materials.

你需要首先使用 MSSQL Server 创建一个数据库，数据库的名称命名为 “SHTourismManagement” 。按照素材文件中的数据字典去创建数据表。

Some EXCEL files are provided in the materials folder. You need to analyze the data in those files and import them into the tables that you create according to the requirements. In addition, make sure the data imported into the database are valid.

素材文件夹中提供了一些 Excel 文件，你需要分析这些文件中的数据，并按照要求将其导入到你创建的数据表中。确保导入到数据库中的各项数据是合法有效的。

### 1.4 CREATE APPLICATION

#### 创建应用

#### CREATE APPLICATION

##### 创建应用

Use .Net to create an application.

使用.Net 平台来创建一个应用程序。

## 1.5 CREATE “MAIN SCREEN”

### 创建 “主窗体”

#### CREATE “MAIN SCREEN”

#### 创建“主窗体”

Create “Main Screen” , which consists of 4 buttons. Please refer to Figure 1.1 for the sketch layout.

创建 “Main Screen” 界面，界面中包含 4 个按钮，请参照示意图如 Fig1.1 。

- About Worldskills
- 关于世赛
- About Worldskills China
- 关于世赛中国
- About Shanghai
- 关于上海
- Login
- 登录

You will be constructing this system gradually, and some functions will be added step by step in the following development.

你将逐步开发此系统，一些功能将在后面的开发中陆续被添加进来。

The information “**? days ? hours ? minutes and ? seconds until the 2017 Abu Dhabi Worldskills Competition starts**” should be displayed at the bottom of each window/screen of the application. This information should be automatically updated in real-time (new value each second). Calculate the amount of time left until the 2017 Abu Dhabi Worldskills Competition starts (2017-10-14 00:00:00).

在应用的每一个窗体/页的底部，都应具有“days ? hours ? minutes and ?seconds until the 2017 Abu Dhabi Worldskills Competition starts”信息，该信息应按照实时自动更新（每秒一个新值）。计算出当前时间距离 2017 年阿联酋阿布扎比世赛开始时间（2017-10-14 00:00:00）所剩的时间。



Fig1.1 The Sketch Layout of Main

## 1.6 CREATE “ABOUT WORLDSKILLS”

### 创建“关于世赛”

## CREATE “ABOUT WORLDSKILLS”

### 创建“关于世赛”

Create “About Worldskills” form, which consists of 3 buttons. Please refer to Figure 1.2 for the sketch layout.

创建 “About Worldskills” 界面，这个界面中包含 3 个按钮，请参照示意图 Fig1.2。

- History of Worldskills
- 世赛历史
- Competition Skills
- 比赛技能
- Previous Competitions
- 之前比赛

If “About Worldskills” button in “Main Screen” form is clicked by the user, redirect to this form.



如果用户单击 “Main Screen” 界面中的 “About Worldskills” 按钮，将会转到此界面。

You will be constructing this system gradually, and some functions will be added step by step in the following development.

你将逐步开发此系统，一些功能将在后面的开发中陆续被添加进来。



Fig1.2 The Sketch Layout of About Worldskills

## 1.7 CREATE “HISTORY OF WORLDSKILLS”

### 创建“世赛历史”

#### CREATE “HISTORY OF WORLDSKILLS”

##### 创建“世赛历史”

Create “History of Worldskills” form. Please refer to Figure 1.3 for the sketch layout. In this form the history and development of Worldskills Competition will be introduced to the public. Pictures related with the history of Worldskills Competition will be displayed in A, and related history information will be shown in B when clicking the pictures in A.

创建 “History of Worldskills” 界面，请参照示意图 Fig1.3。在此界面中，向公众介绍 世界技能大赛的历史及发展状况。在图 A 区域显示与世界技能大赛历史相关的图片，单击该图片，在图 B 区域显示相关的历史信息。

If “History of Worldskills” button in “About Worldskills” form is clicked by the user, redirect to this form.

如果用户单击 “About Worldskills” 界面中的 “History of Worldskills” 按钮，将会

转

到此界面。

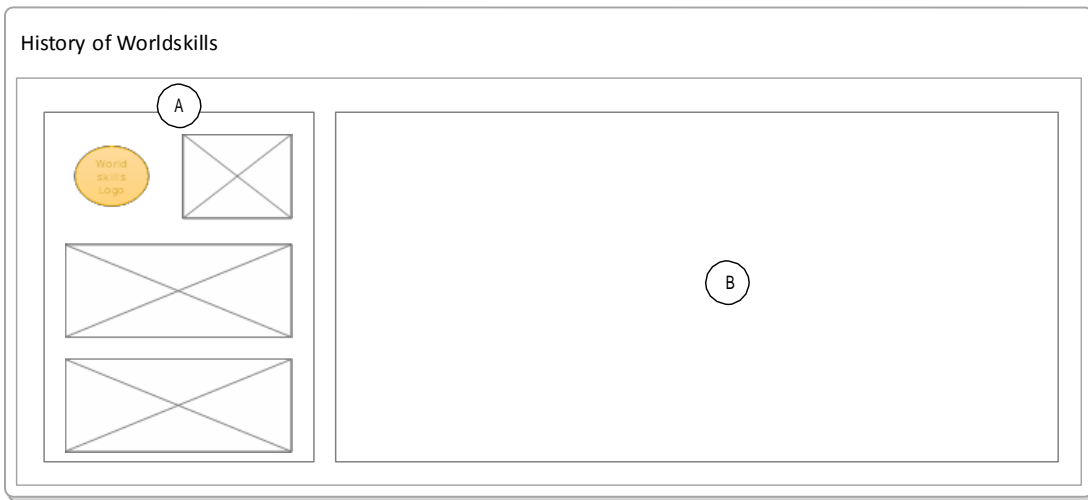


Fig1.3 The Sketch Layout of History of Worldskills

## 1.8 CREATE “COMPETITION SKILLS”

### 创建 “比赛技能”

#### CREATE “COMPETITION SKILLS”

#### 创建“比赛技能”

Create “Competition Skills” form. Please refer to Figure 1.4 for the sketch layout. This form shows the public the different sectors of Worldskills Competition and details of each skill involved in every sector.

创建 “Competition Skills” 界面，请参照示意图 Fig1.4。此界面向公众展示世界技能大赛 的技能领域分类情况，以及各领域所包含的每个技能一些细节信息。

In the tree-form navigation, the menus are divided into 3 levels. Contents displayed in each level are:

在树形导航中，菜单分为三级。各级菜单显示内容为：

- The first-level menu’s name is “All Fields” .
- 一级菜单的名称为 “All Fields” 。
- The second-level menu displays the sector(s) involved in Worldskills Competition.

- 二级菜单显示世界技能大赛所包含的技能领域。
- The third-level menu displays skills involved in every sector.
- 三级菜单列出各领域所包含的技能。

The uses of the tree-form navigation are:

树形导航的作用为：

- Fold and unfold the menus on each level.
- 可以实现各级菜单的折叠和展开。
- When selecting the first-level menu, display on the right the sector(s) involved in Worldskills Competition.
- 选择一级菜单后，在右侧显示大赛所包含的技能领域。
- When selecting the second-level menu, display on the right the skill(s) involved in that sector(s).
- 选择二级菜单中某一项技能领域，在右侧显示该领域所包含的技能。
- When selecting the third-level menu, display on the right the details of that skill(s).
- 选择三级菜单中某一项技能，在右侧显示该技能的详细信息。

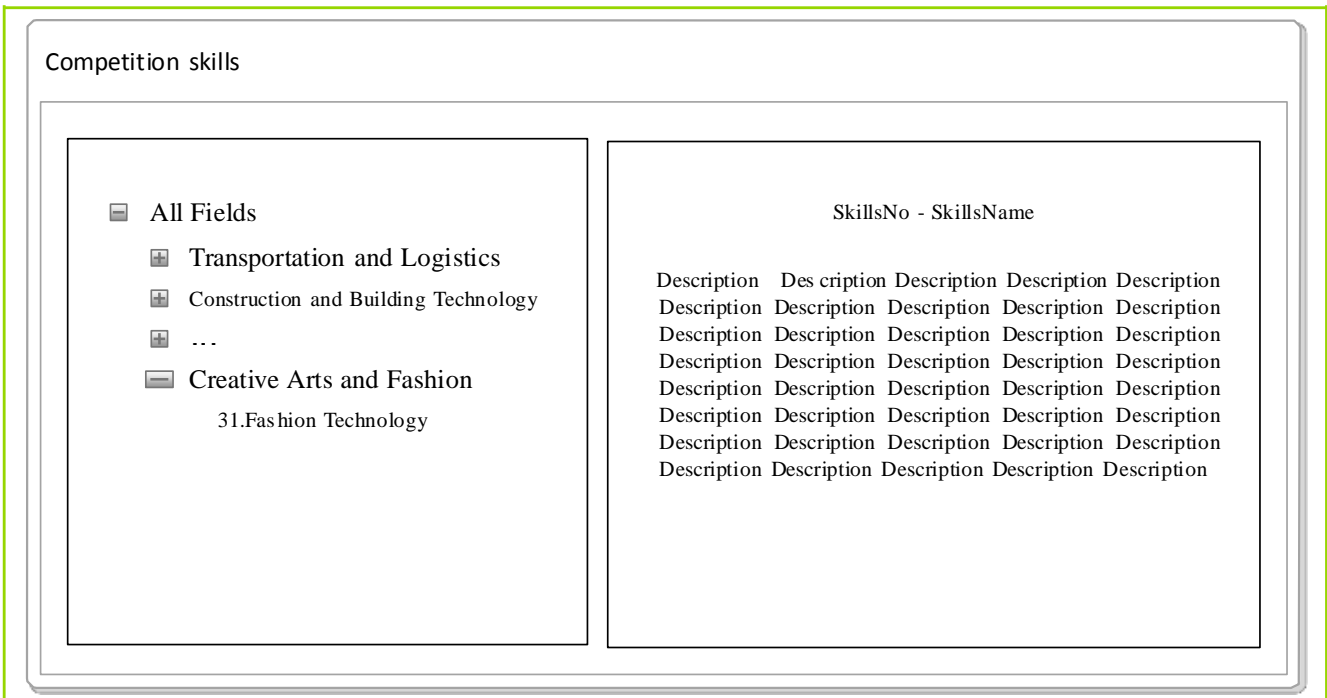


Fig1.4 The Sketch Layout of Competition Skills

## 1.9 CREATE “PREVIOUS COMPETITIONS”

### 创建“之前比赛”

#### CREATE “PREVIOUS COMPETITIONS”

### 创建“之前比赛”

Create “Previous Competitions” form. Please refer to Figure 1.5 for the sketch layout. In this form, information about previous competitions will be displayed to the public.

创建 “Previous Competitions” 界面，请参照示意图 Fig1.5。此界面向公众展示往届世界技能大赛的有关信息。

In this form, the information of previous competitions from XML file will be displayed in data grid, including:

在该界面中，以数据网格的形式显示之前的比赛信息，信息资料来自 XML 文件，内容包括：

- Ordinal Number

- 比赛届数

- Year

- 举办年份

- City, Country

- 举办城市与国家

- Member Number

- 参加成员国数量

If “Previous Competitions” button in “About Worldskills” form is clicked by

the user, redirect to this form.

如果用户单击 “About Worldskills” 界面中的 “Previous Competitions” 按钮，将会 转到此界面。

Previous Competitions

Total Records:XX

OrdinalNo.	Year	City, Country	MemberNo.	
...	...	...	...	
...	...	...	...	

Fig1.5 The Sketch Layout of Previous Competitions

## 1.10 CREATE “ABOUT WORLDSKILLS CHINA”

### 创建“关于世赛中国”

#### CREATE “ABOUT WORLDSKILLS CHINA”

#### 创建“关于世赛中国”


Create “About Worldskills China” . Please refer to Figure 1.6 for the sketch layout. In this form, Information about China’s participation in Worldskills Competition will be shown to the public.

创建 “About Worldskills China” 界面，请参照示意图 Fig1.6。此界面向公众展示中国参加世界技能大赛的情况。

Tags on the left of the form are:

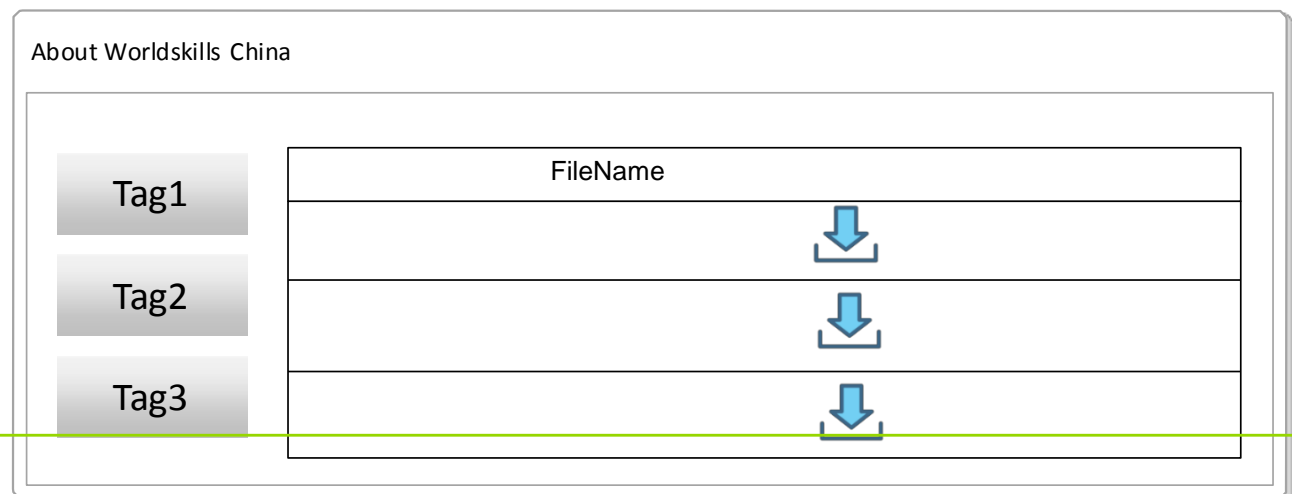
界面左侧的标签有：

- China's Accession to the Worldskills
- 中国加入世赛
- Committee of Worldskills China
- 世赛中国委员会
- Participation and Results
- 参赛和比赛成绩

When the public chooses a tag, display on the right the corresponding list of files. Files can be downloaded by clicking the icon  ( developing simulation download function and saving files to the local route from the local route ). 公众选择一个标签，在右侧显示该标签对应的文件列表。单击下载图标，实现下载文件的功能（实现模拟下载功能，被下载的文件存储在本地）。

If “About Worldskills China” button in “Main Screen” form is clicked by the user, redirect to this form.

如果用户单击 “Main Screen” 界面中的 “About Worldskills China” 按钮，将会转到此 界面。






FileName




Fig1.6 The Sketch Layout of About Worldskills China

## 1.11 CREATE “ABOUT SHANGHAI”

### 创建“关于上海”

#### CREATE “ABOUT SHANGHAI”

#### 创建“关于上海”

Create “About Shanghai” form. Please refer to Figure 1.7 for the sketch layout. In this form, information about Shanghai will be shown to the public from the perspectives of history, events and tourism to help the public learn about Shanghai.

创建 “About Shanghai” 界面，请参照示意图 Fig1.7。此界面分别从历史、事件、游览三个方面向公众展示关于上海的一些信息，以此来帮助公众了解和熟悉上海。

- “History” Tab
- “历史” 选项卡

About:

内容包括：

History introduction of Shanghai’s development

关于上海的发展历史介绍。

- “Event” Tab
- “事件” 选项卡

About:

内容包括：

Big events introduction of Shanghai in recent years

有关上海近几年的重大事件介绍。

Those events will be displayed in ascending order according to the occurring time of every event.

事件按照发生时间的正序顺序显示。

- “Tourism” Tab



- “游览” 选项卡

About:

内容包括：

Show information about scenic spots, hotels and delicious food of Shanghai in the form of pictures. Display pictures details when those pictures are clicked.

以图片形式显示上海的景点，酒店与美食信息，当鼠标单击图片时，显示图片的详细。

If “About Shanghai” button in “Main Screen” form is clicked by the user, redirect to this form.

如果用户单击 “Main Screen” 界面中的 “About Shanghai” 按钮，将会转到此界面。

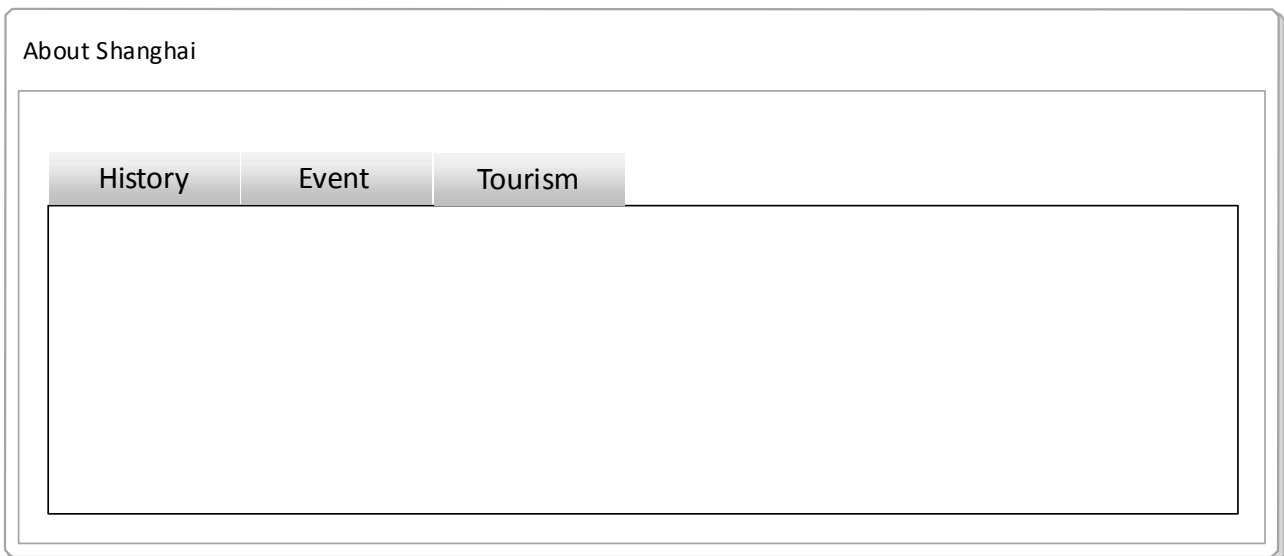


Fig1.7 The Sketch Layout of About Shanghai

## Session 2

## 第 2 阶段

### **INTRODUCTION**

#### **介绍**

In this session, you will be continuing the development of **Skills Competition Management System 2016** application, building on what you have already developed. If you did not complete all the deliverables from the previous session,

do not finish them now, you have new deliverables to work on.

在本阶段,你将基于已经完成的成果,继续开发 2016 年中国技能大赛的应用。如果你未能全部完成上一阶段的可交付成果,现在不要做了,因为你有新的可交付成果需要完成。

## **INSTRUCTIONS TO THE COMPETITOR**

### **向选手的说明**

By the end of this session, you will need to have the following deliverables ready to submit so that the Marathon Skills system will be finished on time.

在本阶段结束时,你需要交付以下可交付成果,以便所开发的系统能够按时完成。

Make sure that you follow the provided style guide throughout all parts of the system.

确保在整个系统开发中都遵循风格指引。

Make sure that you provide appropriate validation and error messages throughout all parts of the system.

确保在整个系统开发中提供合适的验证和错误提示信息。

Make sure that all relevant buttons/links are working at the end of the session.

确保在本阶段末时,所有相关的按钮/链接都运转正常。

Make sure that you use appropriate naming conventions for all parts of the system as needed.

确保在整个系统中都按照需要来使用合适的命名规范。

## DELIVERABLES (SESSION 2)

### 可交付成果 (第 2 阶段)

#### 2.1 RESTORE DATABASE

##### 恢复数据库

#### RESTOER DATABASE

##### 恢复数据库

Restore database backup file to your database using MSSQL Server.

使用数据库管理工具 (MSSQL Server) 恢复数据库备份文件到你的数据库中。

#### 2.2 CREATE "LOGIN SCREEN"

##### 创建“登录窗体”

#### CREATE "LOGIN SCREEN"

##### 创建“登录窗体”

Create "Login Screen" form. Please refer to Figure 2.1 for the sketch layout. This form allows a user to login to the system. They will enter their IdNumber, Password and Auth Code, which will be checked against the database. Show appropriate messages if login is unsuccessful.

创建 "Login Screen" 界面，请参照示意图 Fig 2.1。此界面允许用户登录到系统中，用户需输入身份证号、密码和验证码，根据数据库来检查登录信息。如果登录不成功，显示合适的提示信息。

There will be four different types of users of this system: Competitors, Coordinators, Administrators and Judges.

本系统有 4 种不同类型的用户：参赛者，协调员，管理员和裁判。

- When the user enters correct ID Number, display welcome information behind the ID Number input box as per the user's gender with the format: "Mrs. /Mr. Name" .

- 当用户输入正确的身份证号后，根据用户性别，在身份证号输入框后面显示问候信

息，格式为：“Mrs./Mr. Name”。

- Display Auth Code that has 4 characters in the form, including digits and letters.
- 界面上需显示长度为 4 位的验证码，包含数字和字母。
- By clicking “Remember Me”，IdNumber and Password will be loaded automatically when running the application again.
- 点击 “Remember Me”，再次运行该应用程序时身份证号和密码自动加载。
- If login fails for three times consecutively, the system will automatically clear the input box and login again will be disallowed, which can only be restarted by reactivating the application.
- 如果连续三次登录失败，系统自动清空输入框内容，不允许再次登录，需重新运行应用程序才可继续登录。
- Redirect to different main forms according to the roles after login successfully.
- 成功登录后，按照角色跳转到不同的主界面
  - Competitor：“Competitor Menu”
  - 选手：“选手菜单”
  - Coordinator：“Coordinator Menu”
  - 协调者：“协调者菜单”
  - Administrator：“Administrator Menu”
  - 管理者：“管理者菜单”
  - Judger：“Judger Menu”
  - 裁判：“裁判菜单”

If “Login” button in “Main Screen” is clicked by the user, redirect to this form.

如果用户单击 “Main Screen” 界面中的 “Login” 按钮，将会转到此界面。

Fig 2.1 The Sketch Layout of Login

## 2.3 CREATE “COMPETITOR MENU”

创建“参赛者菜单”

**CREATE “COMPETITOR MENU” 创建“参赛者菜单”**

Create “Competitor Menu” form, which consists of welcome information and 3 buttons. Please refer to Figure 2.2 for the sketch layout.

创建 “Competitor Menu” 界面，此界面包含欢迎信息和 3 个按钮，请参照示意图 Fig 2.2。

Requirements for welcome information:

欢迎信息要求：

- Display Mr. /Mrs. with name and picture according to current login user information.
- 根据当前登录的用户信息，显示 Mr./Mrs.，以及登录用户的姓名和照片。

Requirements for buttons:

按钮要求：

- My Profile

- 我的个人档案
- My Skills
- 我的技能
- My Results
- 我的比赛结果

If a user logs in as a competitor, they will be redirected to this form.

如果一位用户作为参赛者登录，他们将转到此菜单。

You will be developing this system gradually, and some functions will be added step by step in the following development.

你将逐步开发此系统，一些功能将在后面的开发中陆续被添加进来。

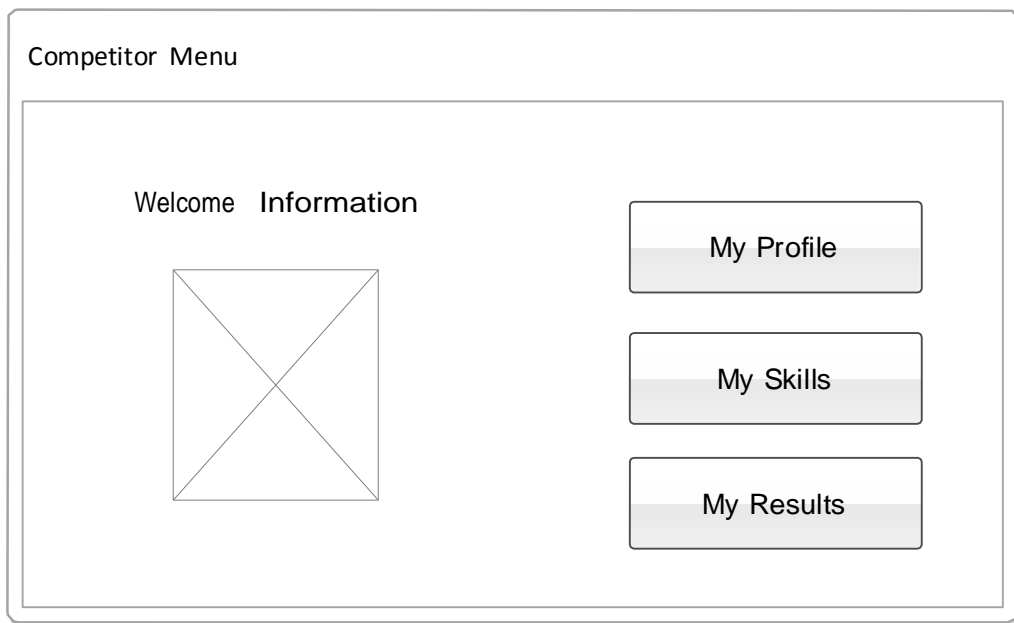


Fig 2.2 The Sketch Layout of Competitor Menu

## 2.4 CREATE “COORDINATOR MENU”

创建“协调者菜单”

**CREATE “COORDINATOR MENU” 创**

**建“协调者菜单”**

Create “Coordinator Menu” form. Please refer to Figure 2.3 for the sketch

layout. This form consists of Welcome information and 3 buttons.

创建“Coordinator Menu”界面，请参照示意图 Fig2.3。此界面中包含欢迎信息及 3 个按钮。

Requirements for Welcome information:

欢迎信息要求：

- Display Mr. / Mrs. with login user's name according to the information of the user who has currently logged into the system.
- 根据当前登录的用户信息，显示 Mr./Mrs.，以及登录用户的姓名。

Requirements for buttons:

按钮要求：

- Volunteer Management
- 志愿者管理
- Sponsorship Management
- 赞助管理
- Competition Services
- 比赛服务

If a user logs in as a coordinator, they will be redirected to this form.

如果一位用户作为协调员登录，他们将转到此菜单。

You will be developing this system gradually, and some functions will be added step by step in the following development.

你将逐步开发此系统，一些功能将在后面的开发中陆续被添加进来。

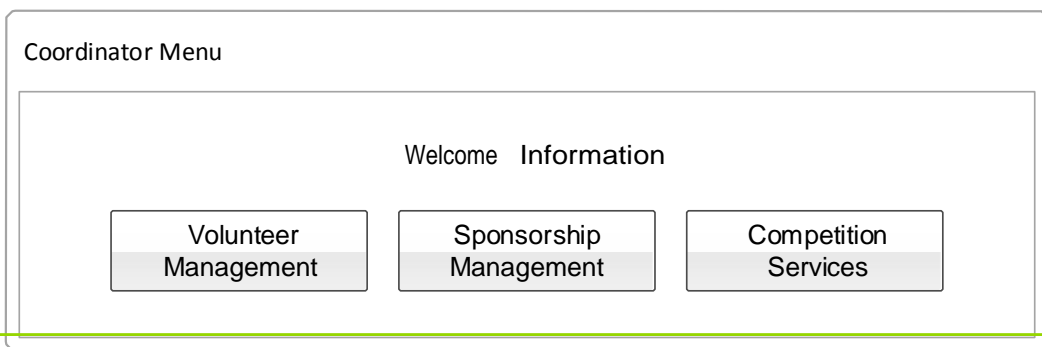




Fig2.3 The Sketch Layout of Coordinator Menu

## 2.5 CREATE “ADMINISTRATOR MENU”

### 创建“管理者菜单”

#### CREATE “ADMINISTRATOR MENU”

#### 创建“管理者菜单”

Create “Administrator Menu” form. Please refer to Figure 2.4 for the sketch layout. This form consists of welcome information and 2 buttons.

创建 “Administrator Menu” 界面，请参照示意图 Fig2.4。此界面中包含欢迎信息及 2 个按钮。

Requirements for welcome information:

欢迎信息要求：

- Display Mr. /Mrs. with name according to current login user information.
- 根据当前登录的用户信息，显示 Mr./Mrs.，以及登录用户的姓名。

Requirements for buttons:

按钮要求：

- Event Management
- 赛事管理
- Competitor Management
- 参赛者管理

If a user logs in as an administrator, they will be redirected to this form.

如果一位用户作为管理员登录，他们将转到此菜单。

You will be developing this system gradually, and some functions will be added step by step in the following development.

你将逐步开发此系统，一些功能将在后面的开发中陆续被添加进来。

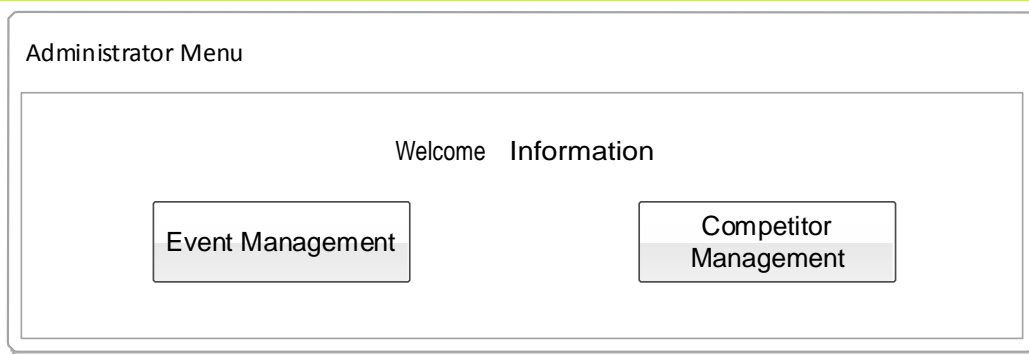


Fig2.4 The Sketch Layout of Administrator Menu

## 2.6 CREATE “JUDGER MENU”

### 创建“裁判菜单”

#### CREATE “JUDGER MENU”

#### 创建“裁判菜单”

Create “Judger Menu” form. Please refer to Figure 2.5 for the sketch layout. There are 3 buttons in this form. When the role of the user is “Judger”, redirect to this form when he/she logins.

创建 “Judger Menu” 界面，请参照示意图 Fig2.5。此界面中包含 3 个按钮，当用户的角色是 “Judger” 时，登录后跳转至该界面。

Requirements for buttons:

按钮要求：

- Draw Lots
- 抽签
- Input Score
- 输入分数
- View Result
- 查看比赛成绩

If a user logins as a judger, they will be redirected to this form.

如果一位用户作为裁判员登录，他们将转到此菜单。

You will be developing this system gradually, and some functions will be added step by step in the following development.

你将逐步开发此系统，一些功能将在后面的开发中陆续被添加进来。

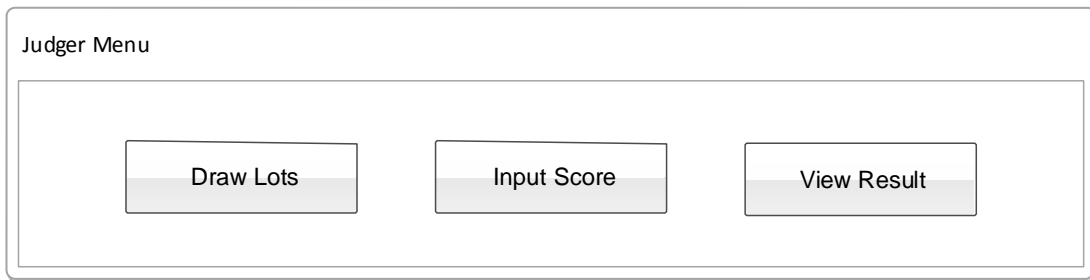


Fig2.5 The Sketch Layout of Judge Menu

## 2.7 CREATE “MY PROFILE”

### 创建“我的个人档案”

#### CREATE “ MY PROFILE”

##### 创建“我的个人档案”

Create “My Profile” form. Please refer to Figure 2.6 for the sketch layout. This form allows competitors to view their profiles including IdNumber, Name, Gender, Province, Email etc. The competitors (who have logged into the system) can modify their passwords. Other information cannot be modified by the competitors because they are imported by the administrators.

创建 “My Profile” 界面，请参考示意图 Fig2.6，此界面允许参赛者查看他们的档案，包括身份证号，姓名，性别，省份，Email 等信息。参赛者（已经登录该系统）可以修改 登录密码。参赛者不能更改其他信息，因为这些信息是管理员录入系统的。

Description:

描述：

- Display the competitors’ basic information in A of the form and the competitors’ pictures and login passwords in B. Login passwords can be modified in B.
- 在界面的 A 区域显示参赛者的基本信息，在界面的 B 区域显示参赛者的照片及登录密

码。在 B 区域可以修改登录密码。

- The password must meet the following requirements:
- 密码必须满足以下要求：
  - At least 6 characters and no more than 16 characters
  - 长度不小于 6 位，不超过 16 位。
  - At least 1 uppercase letter
  - 至少包含一位大写字母。
  - At least 1 lowercase letter
  - 至少包含一位小写字母。
  - At least 1 number/digit
  - 至少包含一位数字。

If “My Profile” button in “Competitor Menu” form is clicked by the user, redirect to this form.

如果用户单击 “Competitor Menu” 界面中的 “My Profile” 按钮，将会转到此界面。

My Profile

A

Idnumber: XXXXXXXXXXXX Name: XXXXXXXX

Gender: XXXXXXXXXXXX XXXX: XXXXXXXX

XXXXXX: XXXXXXXXXXXX XXXX: XXXXXXXX

XXXXXX: XXXXXXXXXXXX XXXX:

XXXXXX

XXXXXX: XXXXXXXXXXXX XXXX:

XXXXXX

B

Password:

Repassword:

Fig2.6 The Sketch Layout of My Profile

## 2.8 CREATE “MY SKILLS”

### 创建“我的技能”

#### CREATE “MY SKILLS”

#### 创建 “我的技能”

Create “My Skills” form. Please refer to Figure 2.7 for the sketch layout. This form shows the competitor the events and skills information that he/she participates in during current competition, including Competitors, Judges, Workshop Layout, Infrastructure and Schedule. If the competitor (who has currently logged into the system) does not attend current events, an appropriate message should be given.

创建 “My Skills” 界面，请参照示意图 Fig2.7。此界面向参赛者展示本届参加的赛事及技能信息，包括参赛选手、裁判、工作车间、设备设施和日程安排。当参赛者（已登录该系统）没有参加本届赛事时，应给予合适的提示信息。

Display skills information that the competitor participates in above the form with the format: SkillsNo.-SkillsName 在界面上方显示参赛者参与的技能信息，格式为“技能编号 – 技能名称”。

- “Competitors” Tab
- 选手选项卡

Display all competitors’ information in the skills that the competitor attends in the form of data grid, including Competitor ID, Name, Gender, Province, and Workstation.

以数据网格形式显示该参赛选手参加的技能中的所有参赛者信息，包括参赛者编号，姓名，性别，省份，工位号。

- “Judgers” Tab
- 裁判选项卡

Display all judges’ information in the skills that the competitor attends in the form of data grid, including: Name, Gender, and Province.

以数据网格形式显示该参赛选手参加的技能中的所有裁判信息，包括裁判姓名，性别，省份。

- “Workshop layout” Tab
- 工作车间选项卡

Display the workshop layout in the skills that the competitor attends in the form of picture.

以图片形式显示该参赛选手参加的技能的工作车间布局图。

- “Infrastructure” Tab
- 设备设施选项卡

Display the infrastructure in the skills that the competitor attends in the form of picture.

以图片形式显示该参赛选手参加的技能及设备设施。

- “Schedule” Tab
- 日程安排选项卡

Display the schedule of the skills that the competitor attends in the form of text.

以文本形式显示该参赛选手参加的技能日程安排。

If “My Skills” button in “Competitor Menu” form is clicked by the user, redirect to this form.

如果用户单击 “Competitor Menu” 界面中的 “My Skills” 按钮 将会转到此界面。

SkillsNo.- SkillsName				
Competitors	Judgers	Workshop Layout	Infrastructure	Schedule
Field1	Field2	Field3		
...	...	...		
...	...	...		

Fig2.7 The Sketch Layout of My Skills

## 2.9 CREATE “MY RESULTS”

### 创建“我的比赛结果”

#### CREATE “MY RESULTS”

#### 创建“我的比赛结果”

Create “My Results” form. Please refer to Figure 2.8 for the sketch layout. This form allows a competitor (who has currently logged into the system) to view the results of the skills that he/she attends in current event.

创建 “My Results” 界面，请参照示意图 Fig.2.8。此界面允许参赛者（已经登录该系统）查看本届赛事中他所参加的技能比赛成绩。

If the competitor does not attend current events or has no results, appropriate messages should be given respectively.

如果该参赛者没有参加本届赛事或没有成绩，分别给出合适的提示信息。 Display the competitor’s basic information and results in A of the form. 在界面的 A 区域显示参赛者的基本信息与成绩信息：

- Name
- 姓名
- Gender
- 性别
- Province: Province Name (Province Code)
- 省份。格式为 “省份名称 (省份代码)”。
- Event: Year held-Event Name
- 赛事。格式为 “年份-赛事名称”。
- Skills: Skill No.-Skill Name
- 参加的技能。格式为 “技能编号-技能名称”。

- Each module s result of TP

- 项目的各模块成绩。
- Total Results
- 总成绩。

If “My Results” button in “Competitor Menu” form is clicked by the user, redirect to this form.

如果用户单击 “Competitor Menu” 界面中的 “My Results” 按钮，将会转到此界面。

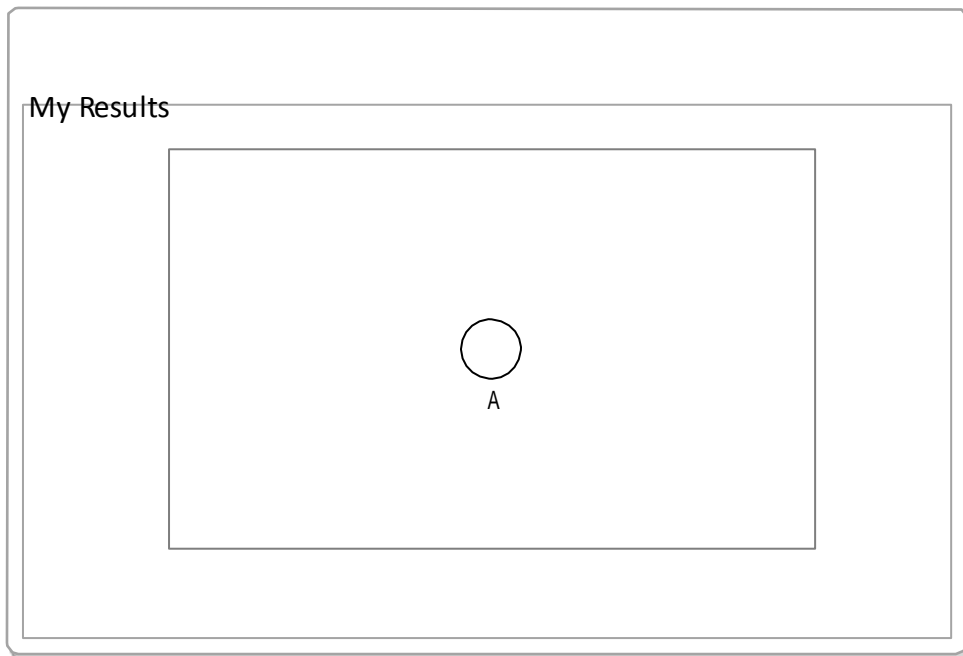


Fig.2.8 The Sketch Layout of My Results

## 2.10 CREATE “VOLUNTEER MANAGEMENT”

### 创建“志愿者管理”

#### CREATE “VOLUNTEER MANAGEMENT”

### 创建“志愿者管理”

Create “Volunteer Management” form. Please refer to Figure 2.9 for the sketch layout. This form allows a coordinator to manage volunteers. The coordinator can filter the volunteers according to the skills that volunteers serve, and they can



sort by all of the fields of the result table in ascending order. If their search

does not return any results, an appropriate message should be displayed.

创建“Volunteer Management”界面，请参照示意图 Fig2.9。此界面允许协调员管理志愿者。协调员能够通过志愿者服务的技能过滤志愿者，且能够对查询结果的所有字段进行正序排序。如果没有志愿者记录，显示一条合适的提示信息。

The total number of volunteers being displayed in the list should be displayed above the data grid.

在数据网格上方显示结果列表中志愿者总数。

Contents in the combo box of Skills include: “All Skills” and all of the skills that are included in current competition (Format: Skill No.-Skill Name)

Skills 组合框中的内容包括：“All Skills”和本届赛事中包含的所有技能（格式：技能编号-技能名称）。

Volunteers information will be displayed in the data grid with the following fields: IdNumber, Name, Gender, Occupation, Province and Skills of Service. 数据网格中显示志愿者的信息，显示的信息包括：身份证号，姓名，性别，职业，省份，服务的技能。

Fulfill the paging function and display 10 records in every page. Paging has the following features:

实现分页功能，每页显示 10 条记录。分页共有以下几种：

- First : 第一页。
- Previous : 前一页。
- Next : 下一页。
- Last : 最后一页。
- User can also directly enter page number to redirect to the designated page.
- 用户也可以直接输入页码，跳转到指定页。

Display in the form current page number and the number of total pages in real time.

在界面中应实时显示当前页码和总页数。

Current Page: 当前页码。

Total Pages:总页数。

If “Volunteer Management” button in “Coordinator Menu” form is clicked by the user, redirect to this form.

如果用户单击 “Coordinator Menu” 界面中的 “Volunteer Management” 按钮，将会转到此界面。

Please refer to the deliverable 2.11- “Import Volunteers” for the information of “Import Volunteers” button.

关于 “Import Volunteers” 按钮的信息，请参考交付成果 2.11 “Import Volunteers”。

Please refer to the deliverable 2.12- “Adjust Volunteers Between Skills” for the information of “Adjust Volunteers Between Skills” button.

关于 “Adjust Volunteers Between Skills” 按钮的信息，请参考交付成果 2.12。

The sketch layout of the Volunteer Management interface includes the following elements:

- Skills:** A dropdown menu.
- Sort by:** A dropdown menu.
- Search:** A text input field with a search button.
- Buttons:** "Import volunteers" and "Adjust volunteers between skills".
- Total:** "Total Volunteers:XX".
- Table:** A table with 5 columns and 3 rows. The first three columns are labeled "Field1", "Field2", and "Field3". The first two rows contain "..." in the first three columns.
- Page Navigation:** "Current Pages", "Page/Total", and buttons for "First", "Previous", "Next", "Last".
- Go to page:** A text input field containing "1" and a "Go" button.

Fig2.9 The Sketch Layout of Volunteer Management

## 2.11 CREATE “IMPORT VOLUNTEERS”

### 创建“导入志愿者”

#### CREATE “IMPORT VOLUNTEERS”

### 创建“导入志愿者”

Create “Import Volunteers” form. Please refer to Figure 2.10 for the sketch layout. This form allows a coordinator to import volunteer list. The coordinator can choose a CSV file that meets the format requirements and click “Import” to fulfill the import function.

创建 “Import Volunteers” 界面，请参照示意图 Fig2.10。此界面允许协调员导入志愿者列表。协调员可以选择一个满足格式要求的 CSV 文件并点击 “Import” 完成导入操作。

Fields included in the CSV file should be displayed in the form.

在界面中，应显示 CSV 文件中包含的字段。

“Import” features include: 导入

的功能包括：

- If the chosen file is not a valid CSV file, or does not meet the format requirements, an appropriate message should be displayed.
- 如果所选文件不是有效的 csv 文件，或者不符合格式要求，应显示合适的提示信息。
- The imported volunteers record should be added to the existing data. If certain record being imported has the same IdNumber with the existing record, replace the existing record with the newly imported record.
- 导入的志愿者记录应附加到现有数据中。如果正在导入的某条记录与现有的记录有同样的 IdNumber，新记录应覆盖原记录。
- Display the total number of the imported records when the importing is completed, the newly inserted record number and the replaced record number.

- 导入完成后，显示导入的记录总数量,新插入的记录条数与覆盖原有记录条数。

If “Import Volunteers” button in “Volunteer Management” form is clicked by the user, redirect to this form.

如果用户单击 “Volunteer Management” 界面中的 “Import Volunteers” 按钮，将会转到此界面。

Import Volunteers

CSV File:

The CSV file should have the following fields:  
 Field1: description of the field  
 Field2: description of the field  
 Field3: description of the field  
 Field4: description of the field

Fig2.10 The Sketch Layout of Import Volunteers

## 2.12 CREATE “ADJUST VOLUNTEERS BETWEEN SKILLS”

### 创建“各技能间调整志愿者”

#### CREATE “ADJUST VOLUNTEERS BETWEEN SKILLS”

### 创建“各技能间调整志愿者”

Create “Adjust Volunteers Between Skills” form. Please refer to Figure 2.11 for the sketch layout. This form allows a coordinator to adjust skills that volunteers serve.

创建 “Adjust Volunteers Between Skills” 界面，请参照示意图 Fig2.11。此界面允许协调员调整志愿者服务的技能。

- Source Skills: Skills that need to call out volunteers. Format: “Skill Number-Skill Name”
- Source Skills : 需要调出志愿者的技能。格式为 “技能编号-技能名称” 。
- Target Skills: Skills that need to call in volunteers. Format: “Skill Number-Skill Name”
- Target Skills : 需要调入志愿者的技能。格式为 “技能编号-技能名称” 。

When clicking “Search” button, display the volunteers who serve the skills selected in the combo box of Source Skills in the data grid below, including: ID Number, Name, Gender, Occupation etc.

单击 “Search” 按钮后，将服务于 Source Skills 组合框中选中的技能的志愿者显示在下方 的数据网格中。显示的信息包括：身份证号，姓名，性别，职业等。

When clicking “Submit” button, move in batch the volunteers selected in the data grid from the skills selected in the combo box of Source Skills to the skills selected in the combo box of Target Skills.

单击 “Submit” 按钮，可以将数据网格中选中的志愿者由 Source Skills 组合框中选中的技能批量移动到 Target Skills 组合框中选中的技能中。

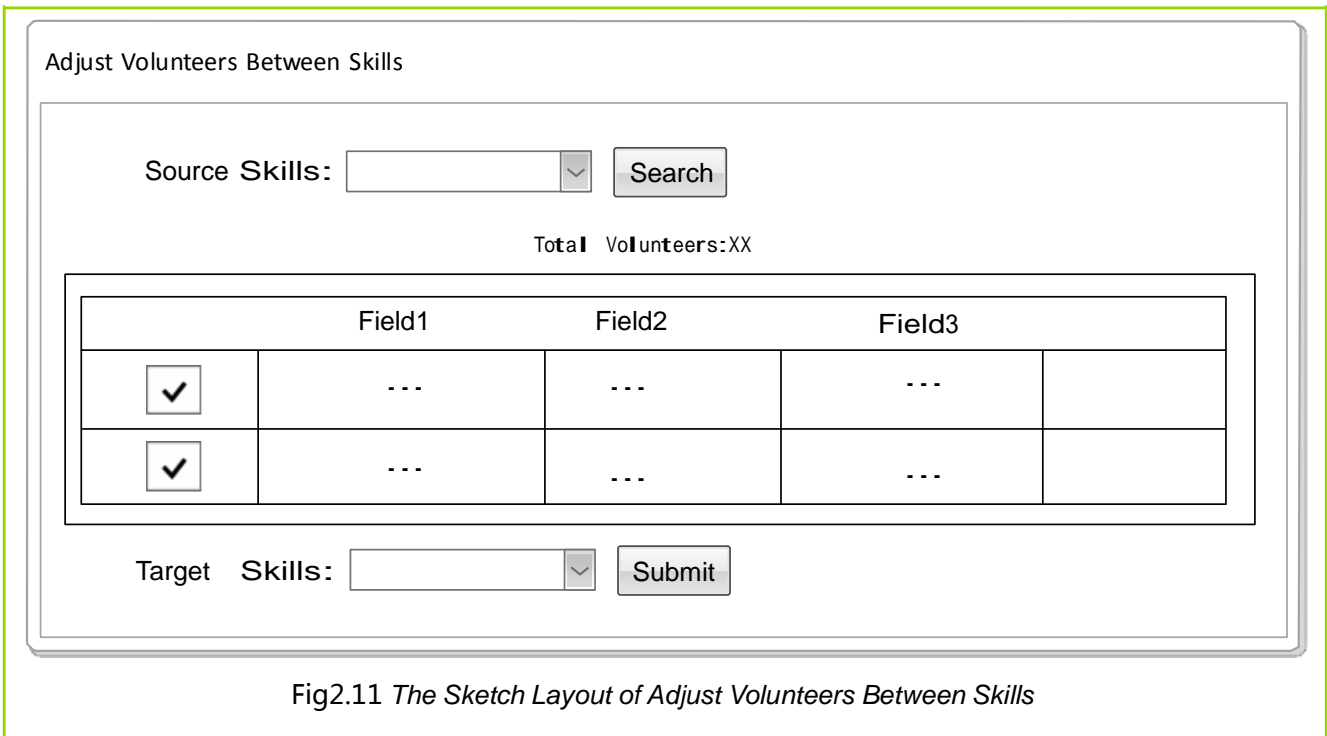
Display the total number of volunteers who are searched above the data grid.

在数据网格上方显示查询出的志愿者总数量。

If “Adjust Volunteers Between Skills” button in “Volunteer Management” form

is clicked by the user, redirect to this form.

如果用户单击 “Volunteer Management” 界面中的 “Adjust volunteers between skills” 按钮，将会转到此界面。



## 2.13 CREATE “SPONSORSHIP MANAGEMENT”

### 创建“赞助管理”

#### CREATE “SPONSORSHIP MANAGEMENT”

#### 创建“赞助管理”

Create “Sponsorship Management” form. Please refer to Figure 2.12 for the sketch layout. There are 3 buttons in this form:

创建 “Sponsorship Management” 界面，请参照示意图 Fig2.12。该界面包含三个按钮：

- Sponsorship Statistics
- 赞助统计
- Sponsorship View
- 查看赞助
- Sponsorship Chart
- 赞助图表

If “Sponsorship Management” button in “Coordinator Menu” form is

clicked



by the user, redirect to this form.

如果用户单击 “Coordinator Menu” 界面中的 “Sponsorship Management” 按钮，将会转到此界面。

You will be developing this system gradually, and some functions will be added step by step in the following development.

你将逐步开发此系统，一些功能将在后面的开发中陆续被添加进来。

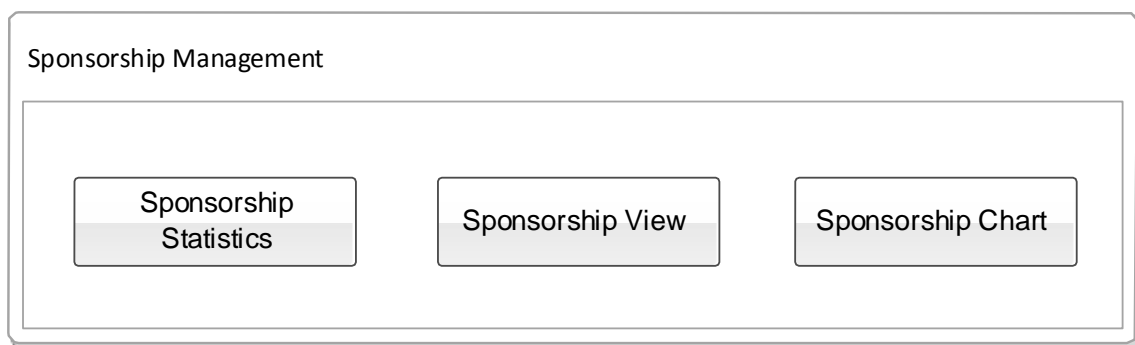


Fig2.12 The Sketch Layout of Sponsorship Management

## 2.14 CREATE “SPONSORSHIP STATISTICS”

### 创建“赞助统计”

#### CREATE “SPONSORSHIP STATISTICS”

#### 创建“赞助统计”

Create “Sponsorship Statistics” form. Please refer to Figure 2.13 for the sketch layout. This form allows a coordinator to view sponsorship information received in every Event. The coordinator can filter the information according to the Events.

创建 “Sponsorship Statistics” 界面，请参照示意图 Fig 2.13。此界面允许协调员查看 各届赛事收到的赞助信息。协调员可以根据赛事过滤信息。

- Event: display “All Events” and events from the data tables (Format: Year held-Event Name)
- Event : 显示的内容包括 “All Events” 和来自数据表中赛事 (格式: 举办年份-赛事名称)。

Contents shown in the data grid include:

数据网格显示的内容包括：

- Event: Year held-Event Name
- 赛事：格式为，举办年份-赛事名称。
- SponsorClass Name
- 赞助物品类别
- Amount(¥): display the total amounts of sponsorship received for that SponsorClass Name.
- 赞助金额. 显示内容为该赞助物品类别收到的赞助总金额。

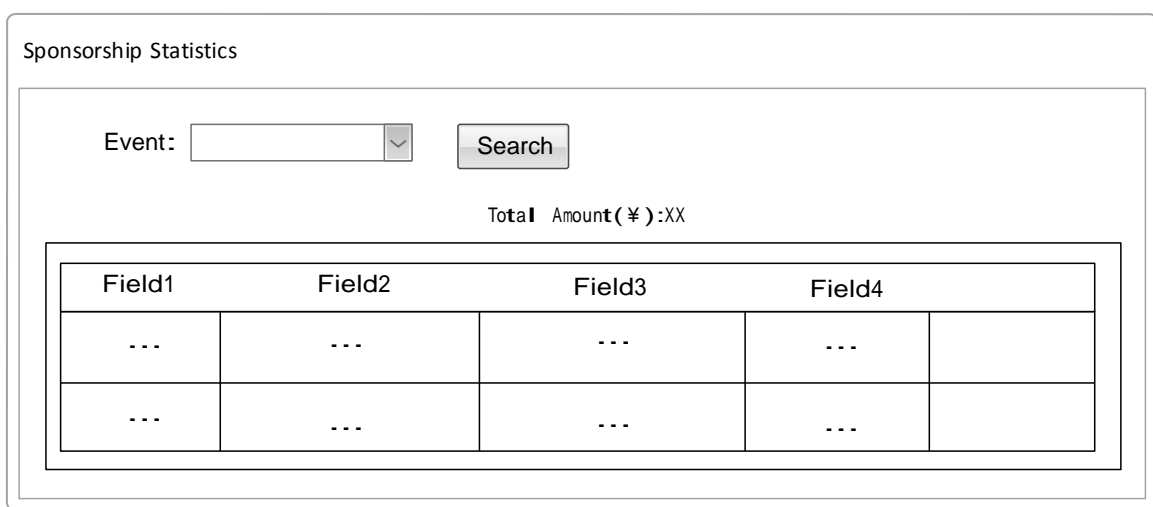
Display total sponsorship amounts above the data grid. 在

数据网格上方显示总赞助金额。

If “Sponsorship Chart” button in “Sponsorship Management” form is clicked

by the user, redirect to this form.

如果用户单击 “Sponsorship Management” 界面中的 “Sponsorship Chart” 按钮，将会转到此界面。



The sketch layout of the 'Sponsorship Statistics' form is as follows:

Sponsorship Statistics

Event:

Total Amount(¥):XX

Field1	Field2	Field3	Field4
...	...	...	...
...	...	...	...

Fig 2.13 The Sketch Layout of Sponsorship Statistics

## 2.15 CREATE “SPONSORSHIP VIEW”

### 创建“查看赞助”

#### CREATE “SPONSORSHIP VIEW”

#### 创建“查看赞助”

Create “Sponsorship View” form. Please refer to Figure 2.14 for the sketch layout. This form allows a coordinator to view sponsorship information. The coordinator can filter the information according to events, skills and sponsors. Sponsors’ names will be searched via fuzzy search.

创建 “Sponsorship View” 界面，请参照示意图 Fig 2.14。此界面允许协调员查看赞助信息。协调员可以根据赛事、技能和赞助商过滤信息。赞助商名称使用模糊查询。

- Event: display “All Events” and events from the data tables (format: Year held- Event Name)
- Event : 赛事。显示的内容包括 “All Events” 和来自数据表中赛事 (格式 : 举办年份- 赛事名称)。
- Skills: display “All Skills” and skills from the data tables (format: Skill Number- Skill Name)
- Skills : 技能。显示的内容包括 “All Skills” 和来自数据表中的技能 (格式 : 技能编号- 技能名称)。
- Sponsor: Sponsor Name
- Sponsor : 赞助商名称。

Contents shown in the data grid include:

数据网格中显示的内容包括 :

- Event Name: “Year held- Event Name”
- 赛事名称。格式为 “举办年份-赛事名称”。
- Skill Name: “Skill Number-Skill Name”
- 技能名称。格式为 “技能编号-技能名称”。

- Sponsor
- 赞助商名称
- Sponsor Item
- 赞助的物品名称
- Amount(¥)
- 赞助金额

Display the total number of the records and total amounts of sponsorship above the list.

在数据网格上方显示总记录条数和赞助总金额。

If “Sponsorship View” button in “Sponsorship Management” form is clicked by the user, redirect to this form.

如果用户单击 “Sponsorship Management” 界面中的 “Sponsorship View” 按钮，将会转到此界面。

Please refer to the deliverable 2.16 for the information of “Export” button. 关于 “Export” 按钮的信息，请参考交付成果 2.16 。

Sponsorship View

Event:  ▾

Sponsor:

Skills:  ▾

Total Records:XXX Total Amount(¥):XX

Field1	Field2	Field3	Field4
...	...	...	...
...	...	...	...

Fig 2.14 *The Sketch Layout of Sponsorship View*

## 2.16 CREATE “EXPORT SPONSORSHIP”

### 创建“导出赞助”

#### CREATE “EXPORT SPONSORSHIP”

#### 创建“导出赞助”

Create “Export Sponsorship” form. Please refer to Figure 2.15 for the sketch layout. This form allows a coordinator to export sponsorship details list filtered by the criteria in “Sponsorship View” form. The exported file is in the format of XML. Display the total number of the exported file records and the route of the exported file after the export is completed.

创建 “Export Sponsorship” 界面，请参照示意图 Fig2.15。此界面允许协调员导出在 “Sponsorship View” 界面中根据条件过滤得到的赞助详细列表信息。导出文件格式为 XML，导出完成后，显示导出的记录总数及导出文件的路径。

If “Export” button in “Sponsorship View” form is clicked by the user, redirect to this form.

如果用户单击 “Sponsorship View” 界面中的 “Export” 按钮，将会转到此界面。



The diagram shows a rectangular window titled "Export Sponsorship". Inside the window, there is a label "File Location:" followed by a rectangular text input field. To the right of the input field is a button labeled "Browse". Below the input field and "Browse" button are two buttons: "Export" on the left and "Cancel" on the right.

Fig2.15 The Sketch Layout of Export Sponsorship

## 2.17 CREATE “SPONSORSHIP CHART”

### 创建“赞助图表”

#### CREATE “SPONSORSHIP CHART”

## 创建“赞助图表”

Create “Sponsorship Chart” form. Please refer to Figure 2.16 for the sketch layout. This form allows a coordinator to view sponsorship statistics information by chart. Display on the left the total sponsorship amounts received in each Event by bar graph (Currency Unit: \$ Million with 2 decimals, rounding off), and the horizontal axis means the Year held of an Event and the vertical axis means the total amounts of sponsorship. Display on the right a set of CheckBox to show all the held years of the Events, and it can be controlled through the CheckBox whether the received sponsorship information in certain Event should be visible in the bar graph:

创建 “Sponsorship Chart” 界面，请参照示意图 Fig2.16。此界面允许协调员用图表来查看赞助统计信息。左侧使用柱形图显示每届赛事收到的赞助总额（单位是：百万元，保留 2 位小数，四舍五入。），横轴代表赛事举办年份，纵轴代表赞助总金额。

右侧显示一组 CheckBox 复选框，显示所有的赛事举办年份，通过复选框可以控制某届赛事收到的赞助信息是否在柱形图中可见：

- When the corresponding Event checkbox is checked, display the Event's sponsorship information in the bar graph.
- 当对应的赛事选择框被选中时，赛事赞助信息显示在柱形图中。
- When the corresponding Event checkbox is not checked, do not display the Event's sponsorship information in the bar graph.
- 当对应的赛事选择框未被选中时，赛事赞助信息不出现在柱形图中。

Display all the sponsorship received in all the Events when the form is opened for the first time.

初始打开界面时，显示全部赛事收到的赞助。

If “Sponsorship Chart” button in “Sponsorship Management” form is clicked by the user, redirect to this form.

如果用户单击 “Sponsorship Management” 界面中的 “Sponsorship Chart” 按钮，

将会转到此界面。

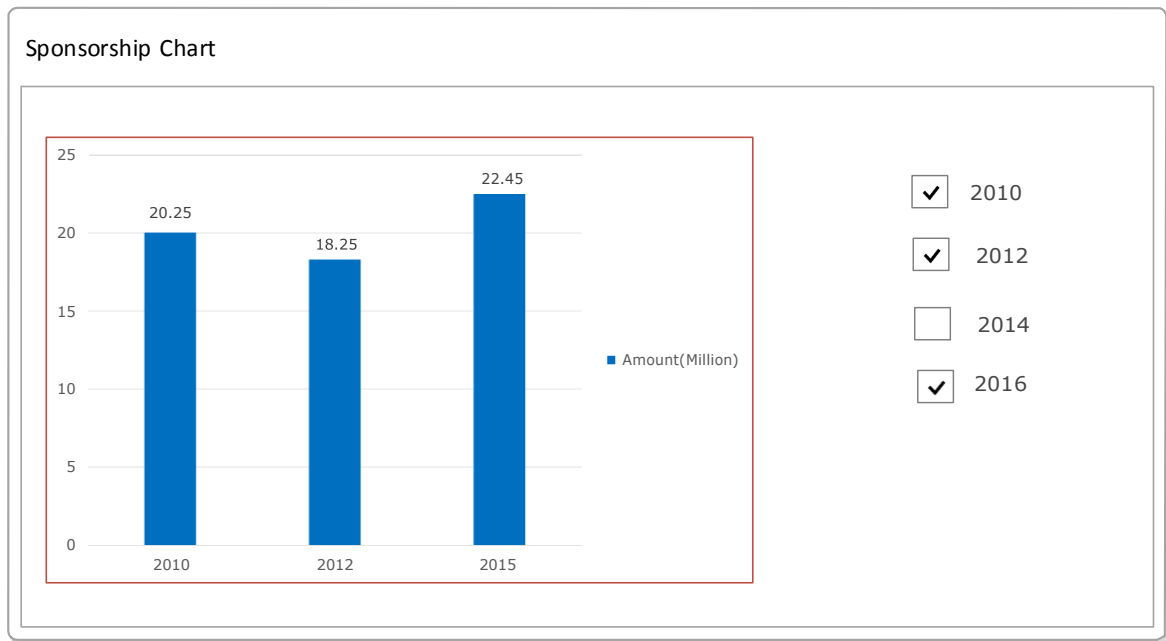


Fig2.16 The Sketch Layout of Sponsorship Chart

## 2.18 CREATE “COMPETITION SERVICE”

### 创建“比赛服务”

#### CREATE “COMPETITION SERVICE”

#### 创建“比赛服务”

Create “Competition Service” form. Please refer to Figure 2.17 for the sketch layout. This form allows a coordinator to view the skills situations in each zone of the competition site in current Event. The coordinator can switch to different zones to view corresponding skills information.

创建 “Competition Service” 界面，请参照示意图 Fig2.17。此界面允许协调员查看当前赛事中赛场各区域的参赛项目情况。协调员可以通过选项卡在不同区域之间查看技能信息。

Contents to be displayed include: Skill No. , Skill Name , The Number of Competitors , The Number of Judges.

显示的内容包括：技能编号,技能名称,参赛者数量,裁判数量。



When clicking a skill, display its workshop layout.

当鼠标单击某项技能时，显示该技能的工作车间布局图。

If “Competition Service” button in “Competition Service” form is clicked by the user, redirect to this form.

如果用户单击 “Coordinator Menu” 界面中的 “Competition Service” 按钮，将会转 到此界面。

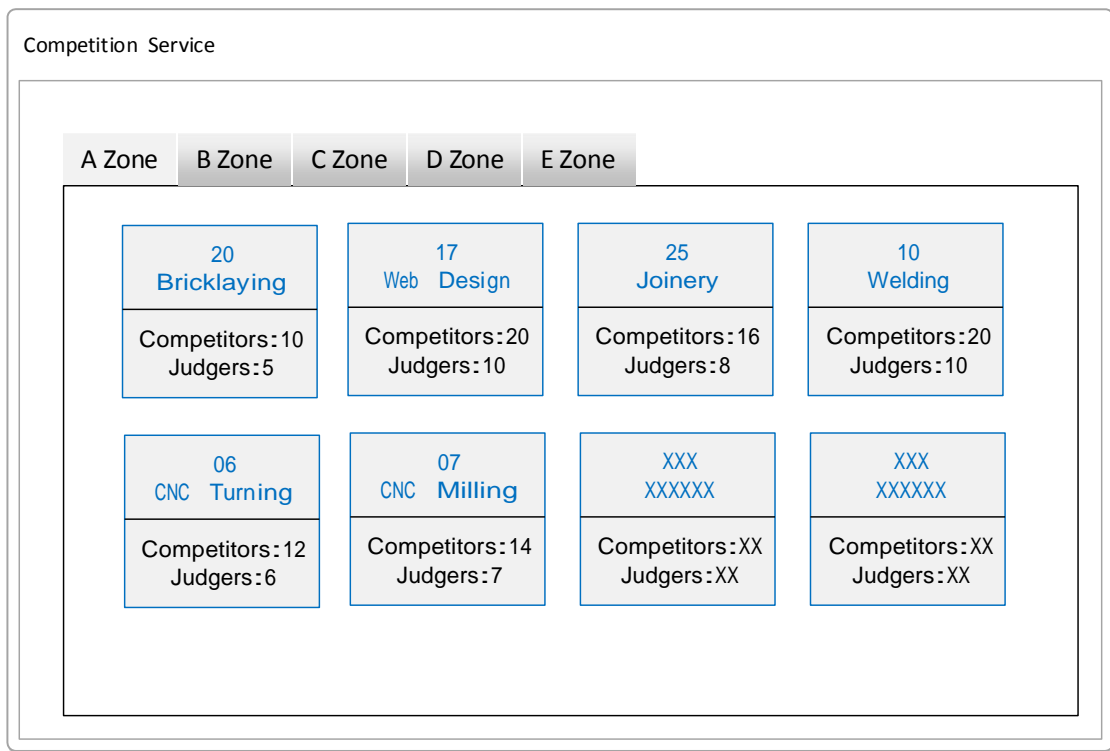


Fig2.17 The Sketch Layout of Competition Service

Session 3

第 3 阶段

## INTRODUCTION

### 介绍

In this session, you will be continuing the development of **Skills Competition Management System 2016** application, building on what you have already developed. If you did not complete all the deliverables from the previous session, do not finish them now, you have new deliverables to work on.

在本阶段,你将基于已经完成的成果,继续开发 2016 年中国技能大赛的应用。如果你未能全部完成上一阶段的可交付成果,现在不要做了,因为你有新的可交付成果需要完成。

## INSTRUCTIONS TO THE COMPETITOR

### 向选手的说明

By the end of this session, you will need to have the following deliverables ready to submit so that the Marathon Skills system will be finished on time.

在本阶段结束时,你需要交付以下可交付成果,以便所开发的系统能够按时完成。

Make sure that you follow the provided style guide throughout all parts of the system.

确保在整个系统开发中都遵循风格指引。

Make sure that you provide appropriate validation and error messages throughout all parts of the system.

确保在整个系统开发中提供合适的验证和错误提示信息。

Make sure that all relevant buttons/links are working at the end of the session.

确保在本阶段末时,所有相关的按钮/链接都运转正常。

Make sure that you use appropriate naming conventions for all parts of the system as needed.

确保在整个系统都按照需要来使用合适的命名规范。

## DELIVERABLES (SESSION 3)

### 可交付成果 (第 3 阶段)

#### 3.1 CREATE “EVENT MANAGEMENT”

##### 创建“赛事管理”

#### CREATE “EVENT MANAGEMENT”

##### 创建“赛事管理”

Create “Event Management” form. Please refer to Figure 3.1 for the sketch layout. This form consists of 2 buttons.

创建 “Event Management” 界面，请参照示意图 Fig3.1。该界面包含两个按钮：

- Competition Event
- 比赛赛事
- Competition Skills
- 比赛技能

If “Event Management” button in “Administrator Menu” form is clicked by the user, redirect to this form.

如果用户单击 “Administrator Menu” 界面中的 “Event Management” 按钮，将会 转到此界面。

You will be developing this system gradually, and some functions will be added step by step in the following development.

你将逐步开发此系统，一些功能将在后面的开发中陆续被添加进来。



Fig3.1 *The Sketch Layout of Event Management*

### 3.2 CREATE “COMPETITION EVENT”

#### 创建“比赛赛事”

#### CREATE “COMPETITION EVENT”

#### 创建“比赛赛事”

Create “Competition Event” form. Please refer to Figure 3.2 for the sketch layout. This form allows an administrator to manage the competition events. The administrator can conduct fuzzy search for events. When the entered contents are involved in the events or any item of the province in the data grid, related events information should be filtered and shown.

创建 “Competition Event” 界面，请参照示意图 Fig3.2。此界面允许管理员管理赛事。管理员可以模糊查询赛事，当数据网格中的赛事或省份中任一项包含所输入的内容时，相应的赛事信息就会被过滤显示出来。

Events information should be displayed in the form of data grid, including:

赛事信息以数据网格形式显示，内容包括：

- Events: Year held-Event Name, e.g. “2016-Worldskills China Shanghai”
- 赛事：格式为“举办年份-赛事名称”，如：“2016-Worldskills China Shanghai”。
- Duration: Start time-End time
- 持续时间：格式为“起始时间-结束时间”。
- Province
- 举办省份。

Display the number of events above the data grid.

在数据网格上方，显示赛事数量。

When choosing one line of the data grid, and clicking “Edit” button, relevant information should be prompted (No need to develop related functions).

选择数据网格中的一行，单击“Edit”按钮，提示相关信息（不需要开发相关功能）。

- The status of **“Edit”** button is: **“Enabled”** if that event has not started; **“Disabled”** if that event has started.
- **“Edit”** 按钮的状态为：如果该赛事还未开始，则为 Enabled 状态；否则为 Disabled 状态。

When choosing one line of the data grid, and clicking **“View Registration”** button, redirect to **“View Registration”** form.

选中数据网格中的一行，单击 **“View Registration”** 按钮，可以跳转到查看赛事注册界面。

The function of **“Add an Event”** is not required to develop. **“Add an Event”** 功能不需要开发。

If **“Competition Event”** button in **“Event Management”** form is clicked by the user, redirect to this form.

如果用户单击 **“Event Management”** 界面中的 **“Competition Event”** 按钮，将会转 到此界面。

Refer to the deliverable 3.3- **“View Registration”** for the information of **“View Registration”** button.

关于 **“View Registration”** 按钮的信息，请参考可交付成果 3.3 **“View Registration”** 。



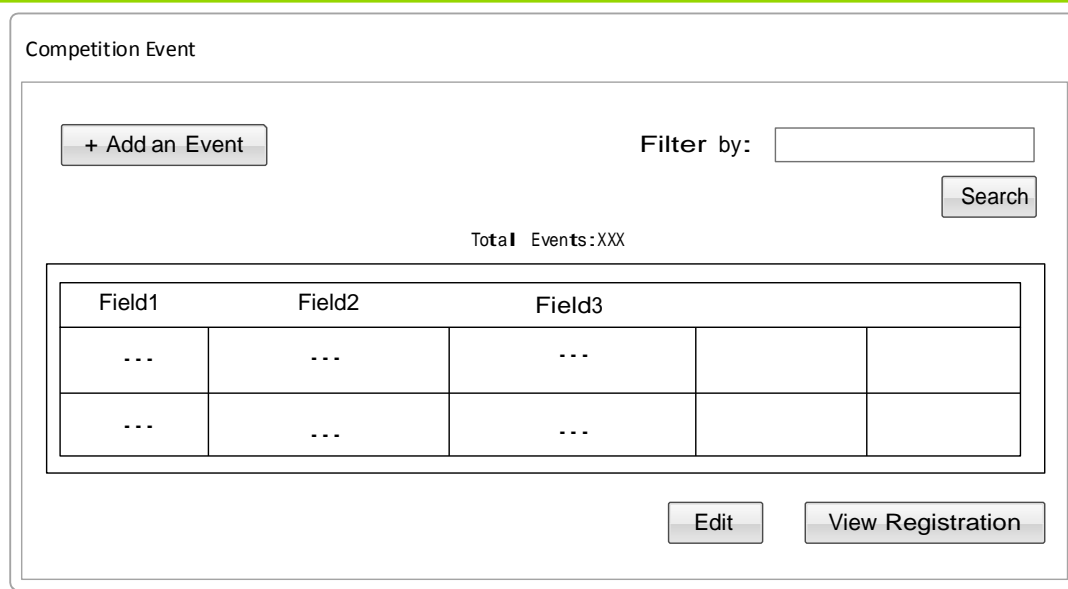


Fig3.2 The Sketch Layout of Competition Event

### 3.3 CREATE “VIEW REGISTRATION”

#### 创建“查看注册”

#### CREATE “VIEW REGISTRATION”

#### 创建“查看注册”

Create “View Registration” form. Please refer to Figure 3.3 for the sketch layout. This form allows an administrator to view the skills registration through skills and provinces.

创建 “View Registration” 界面，请参照示意图 Fig3.3。此界面允许管理员通过技能和 省份来查看技能的注册情况。

The contents displayed in the data grid under “By Skills” Tab include:

“By Skills” 选项卡中，数据网格显示的内容包括：

- Skills: Skill No.-Skill Name, e.g. “09-Software Solutions for Business”
- 技能：格式为 “技能编号-技能名称” ，如 “09-Software Solutions for Business” 。
- Number of Competitors

- 参赛选手总数。
- Competitor' s Province. When multiple provinces register, separate each province by comma. The same province cannot be shown repeatedly.
- 参赛者来自的省份。当有多个省份报名时,省份之间用逗号隔开,相同的省份不可重复显示。
- Number of Judges
- 裁判总数。
- Judger' s Province. When judges are from multiple provinces, separate each province by comma. The same province cannot be shown repeatedly.
- 裁判来自的省份。如果裁判来自多个省份,省份之间用逗号隔开,相同的省份不可重复显示。

The contents displayed in the data grid under “By Province” Tab include: “By Province” 选项卡中,数据网格显示的内容包括:

- Province
- 省份。
- Number of Competitors
- 参赛选手总数。
- List of Skills that competitors from the same province register. Separate each skill by comma. The same skills cannot be shown repeatedly.
- 本省份中参赛者报名参加的技能项目列表,多个技能项目之间用逗号隔开,相同的技能不可重复显示。
- Number of Judges
- 裁判总数。
- List of Skills that judges from the same province judge. Separate each skill by comma. The same skills cannot be shown repeatedly.
- 本省份的裁判人员执裁的技能列表,多个技能项目之间用逗号隔开,相同的技能不可

重复显示。

The total number of competitors and judges should be displayed in the last column of the data grid.

在数据网格的最后一列，需要显示参赛选手总人数和裁判总人数。

If “View Registration” button in “Competition Event” form is clicked by the user, redirect to this form.

如果用户单击 “Competition Event” 界面中的 “View Registration” 按钮，将会转到 此界面。

View Registration				
By Skills		By Province		
Field1	Field2	Field3		
...	...	...		
...	...	...		

Fig3.3 The Sketch Layout of View Registration

### 3.4 CREATE “COMPETITION SKILLS”

#### 创建“比赛技能”

#### CREATE “COMPETITION SKILLS”

#### 创建“比赛技能”

Create “Competition Skills” form. Please refer to Figure 3.4 for the sketch layout. This form allows an administrator to manage skills in the events. When the administrator chooses an event, skills included in that event will be displayed in the data grid below.

创建 “Competition Skills” 界面，请参照示意图 Fig3.4。此界面允许管理员管理赛事中

的技能。管理员选择一项赛事后，在下方数据网格中显示赛事所包含的技能。

The contents displayed in the data grid include: Field , Skills No. , Skills Name.

数据网格中显示的内容包括：领域名称,技能编号,技能名称。

The status of “ Add Skills” buttons is: “Enabled” if that event has not started; “Disabled” if that event has started.

“Add Skills” 按钮的状态为：如果该赛事未开始，为 Enabled 状态；否则为 Disabled 状态。

If “Competition Skills” button in “Event Management” form is clicked by the user, redirect to this form.

如果用户单击 “Event Management” 界面中的 “Competition Skills” 按钮，将会转 到此界面。

Please refer to the deliverable 3.5-Create “Add Skills” for the information of “Add Skills” button.

关于 “Add Skills” 按钮的信息，请参考交付成果 3.5 Create “Add Skills” 。

Competition Skills

Event:

Skills in the selected event

Field1	Field2	Field3	
...	...	...	
...	...	...	

Fig3.4 The Sketch Layout of Competition Skills

### 3.5 CREATE “ADD SKILLS”

#### 创建“添加技能”

#### CREATE “ADD SKILLS”

#### 创建“添加技能”

Create “Add Skills” form. Please refer to Figure 3.5 for the sketch layout. This form allows an administrator to add skills to the selected event. Display in the data grid the skills not included in that event with the format: Skill No.-Skill Name, e.g. “09-Software Solutions for Business”. Display the number of the listed skills above the data grid.

创建 “Add Skills” 界面，请参照示意图 Fig3.5。此界面允许管理员为选中的赛事添加技能。在数据网格中显示该赛事中未包含的技能，格式为“技能编号-技能名称”，如：“09-Software Solutions for Business”。在数据网格上方显示数据网格中技能的数量。

By clicking “Save” button, save the information into the tables and return to “Competition Skills” form and refresh the contents of the data grid in the form.

点击 “Save” 按钮，将信息保存到数据表中，并返回到 “Competition Skills” 界面，刷新界面里数据网格中的内容。

If “Add Skills” button in “Competition Skills” form is clicked, redirect to this form.

如果用户单击 “Competition Skills” 界面中的 “Add Skills” 按钮，将会转到此界面。

Add Skills

Event: 2016 - Worldskills China Shanghai

Skills not in the selected event

Total Skills:XX

Skills	
<input checked="" type="checkbox"/>	...
<input checked="" type="checkbox"/>	...

Save

Fig3.5 The Sketch Layout of Add Skills

### 3.6 CREATE “COMPETITOR MANAGEMENT”

创建“参赛者管理”

CREATE “COMPETITOR MANAGEMENT” 创建“比赛者管理”

Create “Competitor Management” form. Please refer to Figure 3.6 for the sketch layout. This form consists of 2 buttons.

创建 “Competitor Management” 界面，请参照示意图 Fig3.6。该界面包含两个按钮：

- Register Competitor
- 注册参赛者
- View Competitor
- 查看参赛者

If “Competitor Management” button in “Administrator Menu” form is clicked by the user, redirect to this form.

如果用户单击 “Administrator Menu” 界面中的 “Competitor Management” 按钮，将会转到此界面。

You will be developing this system gradually, and some functions will be added

step by step in the following development.

你将逐步开发此系统，一些功能将在后面的开发中陆续被添加进来。

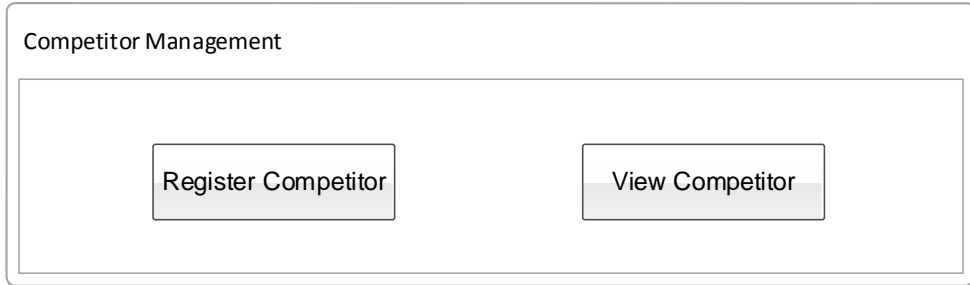


Fig3.6 The Sketch Layout of Competitor Management

### 3.7 CREATE “REGISTER COMPETITOR-SELECT SKILLS”

#### 创建“注册参赛者-选择技能”

#### CREATE “ REGISTER COMPETITOR-SELECT SKILLS”

#### 创建“注册参赛者-选择技能”

Create “Register Competitor-Select Skills” form. Please refer to Figure 3.7 for the sketch layout. The administrator has to select a skill when registering competitors.

创建 “Register Competitor-Select Skills” 界面，请参照示意图 Fig3.7。管理员注册参赛者时，需要首先选择一项技能。

- Skills: display skills included in current Event with the format “ Skill No.-Skill Name” .
- Skills。显示本届赛事中包含的技能，格式为 “技能编号-技能名称” 。

If “Register Competitor” button in “Competitor Management” form is clicked by the user, redirect to this form.

如果用户单击 “Competitor Management” 界面中的 “Register Competitor” 按钮，将会转到此界面。

After the administrator selects a skill, and by clicking “Next” button, “Register Competitor-Individual Skills” form will be opened if Individual Skills are chosen;

“Register Competitor-Team Skills” form will be opened if Team Skills are chosen.

管理员选择一项技能，单击 “Next” 按钮，若是个人技能，打开 “Register Competitor-Individual Skills” 界面，若是团队技能，打开 “Register Competitor-Team Skills” 界面。

You will be developing this system gradually, and some functions will be added step by step in the following development.

你将逐步开发此系统，一些功能将在后面的开发中陆续被添加进来。

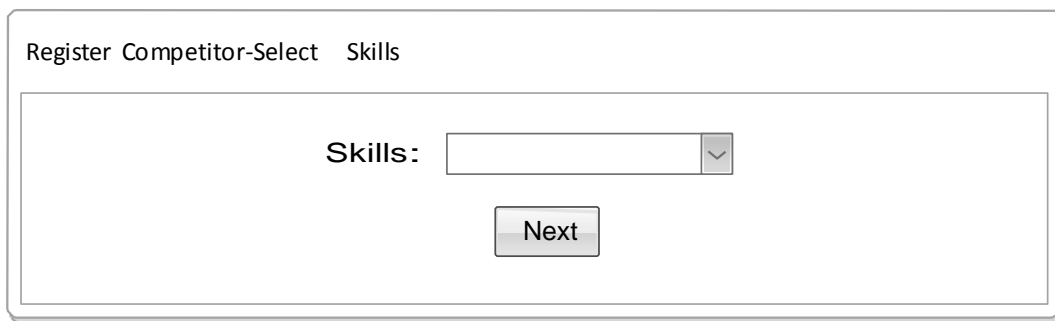


Fig3.7 The Sketch Layout of Register Competitor-Select Skills

### 3.8 CREATE “REGISTER COMPETITOR-INDIVIDUAL SKILLS”

#### 创建“注册参赛者-个人技能”

#### CREATE “ REGISTER COMPETITOR-INDIVIDUAL SKILLS”

#### 创建“注册参赛者-个人技能”

Create “Register Competitor-Individual Skills” form. Please refer to Figure 3.8 for the sketch layout. This form allows an administrator to register competitors of Individual Skills. You need to design the form layout in A and B of Figure 3.8 by adopting appropriate controls.

创建 “Register Competitor-Individual Skills” 界面，请参照示意图 Fig3.8。此界面允许 管理员注册个人项目的参赛者。你需要采用合适的控件，在图 Fig3.8 区域 A 和区域 B 布局。

Requirements for A are as below:



区域 A 要求如下：

- Competitor Number: it is generated automatically when the form is opened. There are 8 digits with the format: Year (4 digits) + Skill Number (2 digits) + Ordinal Number (2 digits), e.g. 20160101. Skill Number is the Number that represents the skill to be registered for the competitor. Ordinal Number is the Number in order of which the competitor is registered. The Ordinal Number for each skill starts from 01.
- Competitor Number: 参赛证号。在界面打开时，自动生成。共 8 位数字，格式：年份（4 位）+技能编号（2 位）+顺序号（2 位），例如:20160101。技能编号是要给参赛者注册的技能的编号，顺序号是注册参赛者的顺序编号，每个技能的顺序号都从 01 开始。
- Validate whether the personal information of a competitor exists or not through ID Number. If it exists, display that competitor' s personal information in the form, and the administrator can register events and skills for him/her directly. If the competitor has already registered current events and skills, he/she cannot register again, and an appropriate message should be given and “Register” button turns to “Disabled” status.
- 通过身份证号验证参赛者个人信息是否已经存在。如果已经存在，在界面上显示参赛者的个人信息，管理员可以直接为其注册赛事和技能。若参赛者已经注册过当前赛事及技能，不允许再次注册，并应给予合适的提示信息，Register 按钮变为不可用状态。
- When valid ID Number is entered, display Birth of Date and Gender automatically. If the penultimate character of the ID Number is an odd number, its owner is male; or else its owner is female.
- 输入合法的身份证号，自动显示出生日期和性别。如果身份证号倒数第二位是奇数，该参赛者是男性；否则是女性。
- The format of Date of Birth: YYYY-MM-DD, the competitor' s age cannot be over 21 years old (Only considering the birth year.)
- 出生日期，格式为 YYYY-MM-DD，且参赛者不能超过 21 岁（仅考虑年份）。

- Province that the competitor represents: selectable, and data are from data tables.
- 选手代表的省份：可选择，数据来自数据表。
- Email: must be in a valid format, e.g. x@x.x
- 电子邮箱：必须为有效格式，如 x@x.x。
- Organization
- 单位
- Contact Address
- 联系地址
- Only Contact Address can be null.
- 只有联系地址可以为空。
- Pictures can be uploaded that are in the following formats: bmp, png, jpg, gif.
- 上传照片，支持的图片形式包含：bmp, png, jpg, gif。

When registering a competitor, the default password assigned for the competitor to login to the application is the last 6 characters of his/her ID Number. 注册参赛者时，默认为该参赛者分配其身份证号后 6 位作为其登录该应用程序的密码。

Requirements for B are as below:

区域 B 要求如下：

Display the information of the registered event in B, including:

在区域 B 显示注册赛事的信息，包括：

- Event Name：赛事名称。
- Skills No. - Skills Name：技能编号-技能名称。

Competitor registration will be fulfilled by clicking “Register” button and save the data into the data tables.

点击 “Register” 按钮，实现参赛者注册功能，并将数据保存到数据表中。

If the skill selected by the user is an Individual Skill when he/she clicks “Next” button in “Register Competitor-Select Skills” form, redirect to this form. 如果用户在 “Register Competitor-Select Skills” 界面中点击 “Next” 按钮选择的是个人技能，将会转到此界面。

Fig3.8 The Sketch Layout of Register Competitor-Individual Skills

### 3.9 CREATE “REGISTER COMPETITOR-TEAM SKILLS”

#### 创建“注册参赛者-团队技能”

#### CREATE “ REGISTER COMPETITOR-TEAM SKILLS”

#### 创建“注册参赛者-团队技能”

Create “Register Competitor-Team Skills” form. Please refer to Figure 3.9 for the sketch layout. This form allows an administrator to register competitors of Team Skills. You need to design the form layout in A and B of Figure 3.9 by adopting appropriate controls.

创建 “Register Competitor-Team Skills” 界面，请参照示意图 Fig3.9。此界面允许管 理员注册团队项目的参赛者。你需要采用合适的控件，在图 Fig3.9 区域 A 和区

域 B 布局。

Requirements for A are as below:

区域 A 要求如下：

- Team Member: display the members information of the current team in data grid, including: Competitor Number, Name, Gender, IdNumber.
- Team Member :团队成员。以数据网格形式显示当前团队中的成员信息 ,显示的内容包括 : Competitor Number, Name, Gender, IdNumber。
- “Add A New Member” form will pop up when the administrator clicks “Add A New Member” button. After the member is added successfully, his/her information will be shown in the data grid of “Team Member” in A. Requirements for “Add A New Member” form are as below:
  - 管理员单击 “Add A New Member” 按钮 ,弹出添加成员界面 ,成员添加成功后 ,成员信息显示在区域 A 的 Team Member 数据网格中。添加成员界面 要求如下 :
  - Competitor Number: it is generated automatically when the form is opened. There are 8 digits with the format: Year (4 digits) + Skill Number (2 digits) + Ordinal Number (2 digits), e.g. 20160101. Skill Number is the Number that represents the skill to be registered for the competitor. Ordinal Number is the Number in order of which the competitor is registered. The Ordinal Number for each skill starts from 01.
  - Competitor Number: 参赛证号。在界面打开时 ,自动生成。共 8 位数字 ,格式 : 年份 ( 4 位 ) + 技能编号 ( 2 位 ) + 顺序号 ( 2 位 ) , 例如:20160101。技能编号是要给参赛者注册的技能的编号 , 顺序号是注册参赛者的顺序编号 , 每个技能的顺序号都从 01 开始。

- Validate whether the personal information of a competitor exists or not

through ID Number. If it exists, display that competitor' s personal information in the form. If the competitor has already registered

current events, he/she cannot register again, and an appropriate message should be given.

- 通过身份证号验证参赛者个人信息是否已经存在。如果已经存在，在界面上显示参赛者的个人信息。若参赛者已经注册过当前赛事，不允许再次注册，并应给予合适的提示信息。
- When valid ID Number is entered, display Birth of Date and Gender automatically. If the penultimate character of the ID Number is an odd number, its owner is male; or else its owner is female.
- 输入合法的身份证号，自动显示出生日期和性别。如果身份证号倒数第二位是奇数，该参赛者是男性；否则是女性。
- The format of Date of Birth: YYYY-MM-DD, the competitor's age cannot be over 21 years old (Only considering the birth year).
- 出生日期，格式为 YYYY-MM-DD，且参赛者不能超过 21 岁（仅考虑年份）。
- Province that the competitor represents: selectable, and data are from data tables.
- 选手代表的省份：可选择，数据来自数据表。
- Email: it must be a valid format, e.g. x@x.x
- 电子邮箱：必须为有效格式，如 x@x.x。
- Organization
- 单位
- Contact Address
- 联系地址
- Only Contact Address can be null.
- 只有联系地址可以为空。
- Users can upload pictures that are in the following formats: bmp, png,

jpg, gif.

- 上传照片，支持的图片形式包含：bmp, png, jpg, gif。
- The default password assigned for the competitor to login to the application is the last 6 characters of his/her ID Number.
- 默认为参赛者分配其身份证号后 6 位作为其登录该应用程序的密码。
- The existing team member can be removed if the administrator clicks “Delete” link in the data grid.
- 管理员单击数据网格中的 Delete 链接，可以移除已存在的团队成员。

Requirements for B are as below:

区域 B 要求如下：

Display the information of the registered event in B, including:

在区域 B 显示注册赛事的信息，包括：

- Event Name：赛事名称。
- Skills No. - Skills Name：技能编号-技能名称。

Team registration will be fulfilled by clicking “Register” button and save the data into the data tables. When Team members represent different provinces, an appropriate message should be given and registration cannot be submitted.

点击 “Register” 按钮，实现团队注册功能，并将数据保存到数据表中。当团队成员所代表的省份不是同一个省时，应给予提示，并且不能提交注册。

If the skill selected by the user is a Team Skill when he/she clicks “Next” button in “Register Competitor-Select Skills” form, redirect to this form.

如果用户在 “Register Competitor-Select Skills” 界面中点击 “Next” 按钮选择的是 团队技能，将会转到此界面。



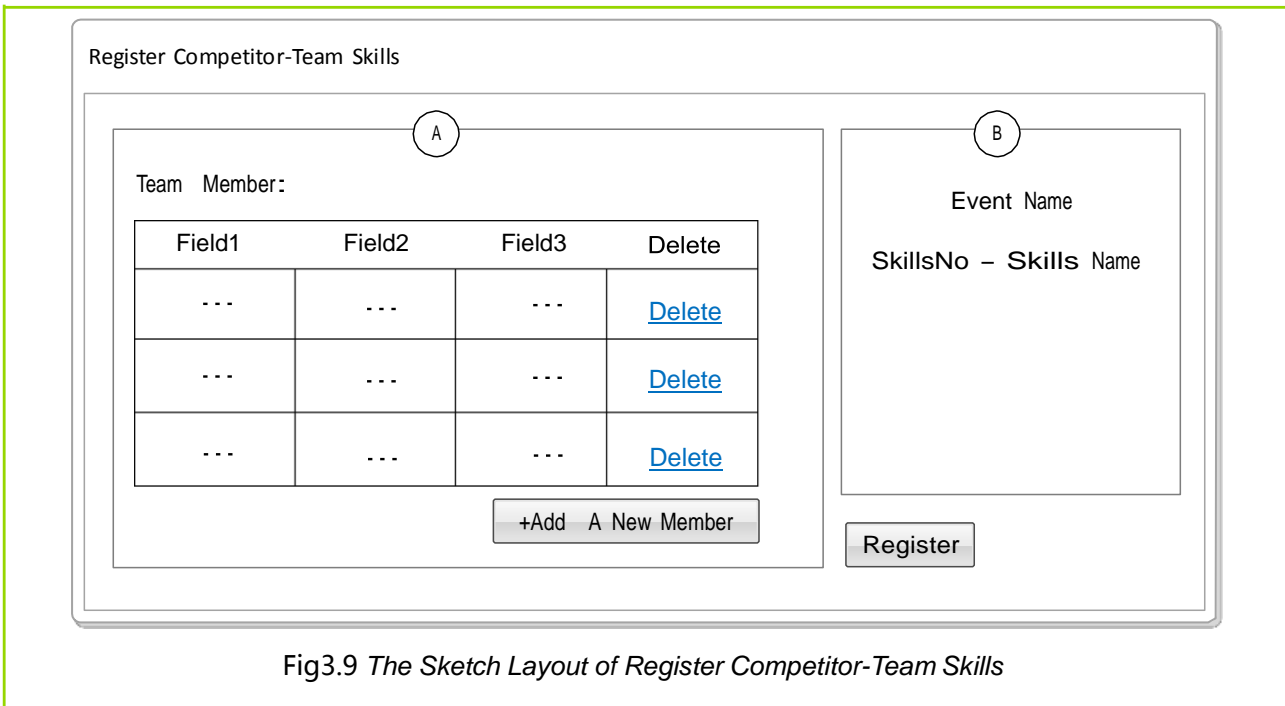


Fig3.9 The Sketch Layout of Register Competitor-Team Skills

### 3.10 CREATE “REGISTER SUCCESSFULLY”

#### 创建“注册成功”

#### CREATE “REGISTER SUCCESSFULLY”

#### 创建“注册成功”

Create “Register Successfully” form. Please refer to Figure 3.10 for the sketch

layout. When the administrator registers a competitor or a team successfully, display this form.

创建 “Register Successfully” 界面，请参照示意图 Fig3.10。当管理员注册参赛者或参赛团队成功后，显示该界面。

Display competitor photo, name, gender, and skill name and competitor number in A. If Team Skill is registered, display all of the team members photos, Name, Gender, Skill Name and Competitor Number.

在 A 区域显示参赛者的照片、姓名、性别、技能名称和参赛证号。若注册的是团队项目，应显示所有团队成员的照片、姓名、性别、技能名称和参赛证号。

The administrator can download competitors pictures in this

form.

管理员可以在该界面下载参赛者的照片。

If the user clicks “Register” button in “Register Competitor-Individual Skills”

form and “Register Competitor-Team Skills” form, redirect to this form.

如果用户在 “Register Competitor-Individual Skills” 界面和 “Register Competitor- Team Skills” 界面中点击 “Register” 按钮，将会转到此界面。

Competitor Card can be printed by clicking “Print Competitor Card” . Please refer to the deliverable 3.11 for the information of “Print Competitor Card” button.

单击 “Print Competitor Card” 可以打印参赛证。关于 “Print Competitor Card” 按钮的信息，请参考交付成果 3.11。

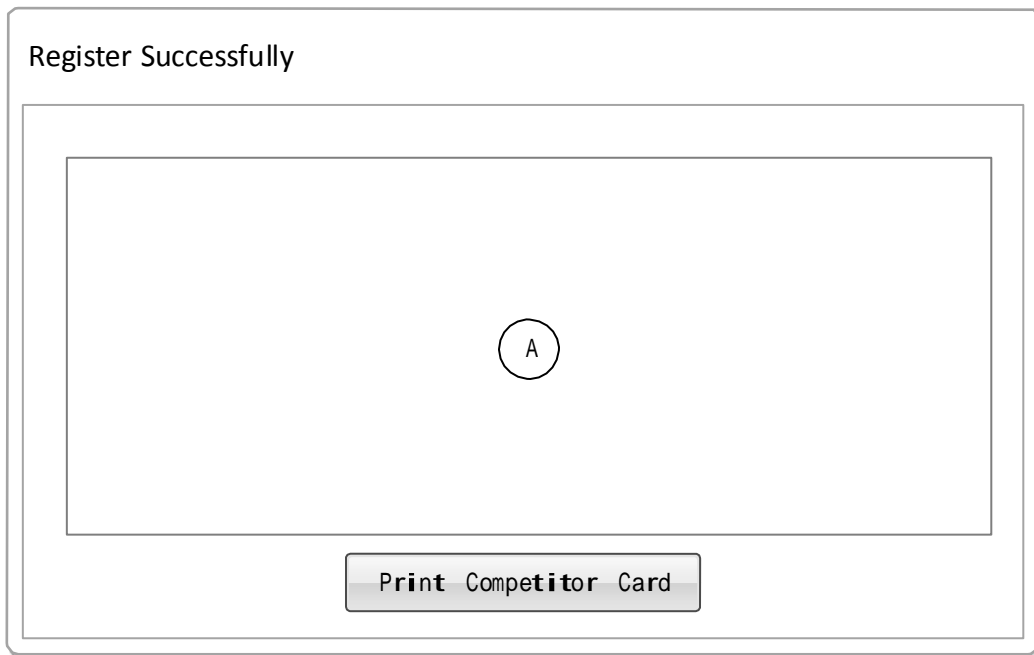


Fig3.10 The Sketch Layout of Register Successfully

### 3.11 CREATE “PRINT COMPETITOR CARD”

#### 创建“打印参赛证”

#### CREATE “PRINT COMPETITOR CARD”

#### 创建“打印参赛证”

Create "Print Competitor Card" form. Please refer to Figure 3.11 for the sketch

layout. This form allows an administrator to print Competitor Cards for competitors who have been registered successfully.

创建 “ Print Competitor Card” 界面，请参照示意图 Fig3.11。此界面允许管理员为注册成功的参赛者打印参赛证。

Print individual Competitor Cards for competitors of Individual Skills; Print all of the team members Competitor Cards for Team Skills. 若是个人项目，则打印个人的参赛证；若是团队项目，则打印团队所有成员的参赛证。 Contents of Competitor Card include:

参赛证中包括：

- Photo
- 照片。
- Name
- 姓名。
- Skills: Skill No.-Skill Name
- Skills:技能编号及名称。格式为 “技能编号-技能名称”
- Number
- 参赛证号。

If “Print Competitor Card” button in “Register Successfully” form is clicked by the user, redirect to this form.

如果用户在 “Register Successfully” 界面中点击 “Print Competitor Card” 按钮，将会转到此界面。

The World Skills China 2016

Photo

Name: Li Zhi

Skills: 06 – CNC Turning

Number: 20160601

Fig3.11 The Sketch Layout of Print Competitor Card

### 3.12 CREATE “VIEW COMPETITOR”

#### 创建“查看参赛者”

#### CREATE “VIEW COMPETITOR”

#### 创建“查看参赛者”

Create “View Competitor” form. Please refer to Figure 3.12 for the sketch layout. This form allows an administrator to view the registered competitors information. The administrator can filter information by Event, Skills, IdNumber, Name, Gender and Province. Hereinto, Fuzzy search should be used for searching Name. In order to have better display effect, you need to freeze Event column and Skills column.

创建 “View Competitor” 界面。请参照示意图 Fig3.12。此界面允许管理员查看已经注册的参赛者信息。管理员可以根据赛事、技能、身份证号、姓名、性别、省份过滤信息。其中，姓名查询需要使用模糊查询。为了实现更好地显示效果，你需要冻结赛事列和技能列。

Contents displayed in the data grid include: Event, Skills, Name, Gender,

IdNumber, Province, Whether a Team Skill

数据网格中显示的内容包括：赛事,技能,姓名,性别,身份证号,省份,是否团队项目。

The total number of competitors should be displayed above the data grid.

在数据网格上方显示参赛者数量的总计。

The status of “Edit” button should change dynamically when one line of the data grid is chosen: the status should be “Enabled” if the skill that the competitor attends has not begun yet; the status should be “Disabled” if that skill has already begun.

选择数据网格中的一行，“Edit”按钮的状态应动态变化：参赛者所报技能还未开始比赛，为 Enabled 状态；否则为 Disabled 状态。

The function of “Edit” button is not required to develop. “Edit”按钮的功能不需要开发。

If “View Competitor” button in “Competitor Management” form is clicked by the user, redirect to this form.

如果用户在“Competitor Management”界面中点击“View Competitor”按钮，将会转到此界面。

The screenshot shows a web form titled "View Competitor". At the top, there are search filters: "Event:" with a dropdown, "Skills:" with a dropdown, "IdNumber:" with a text input, "Name:" with a text input, "Gender:" with a dropdown, and "Province:" with a dropdown. A "Search" button is located to the right of the IdNumber field. Below the filters is a data grid with 4 columns labeled "Field1", "Field2", "Field3", and "Field4", and 3 empty rows. At the bottom right of the grid area is an "Edit" button.

Fig3.12 *The Sketch Layout of View Competitor*



Session 4

第 4 阶段

---

## INTRODUCTION

### 介绍

In this session, you will be continuing the development of **Skills Competition Management System 2016** application, building on what you have already developed. If you did not complete all the deliverables from the previous session, do not finish them now, you have new deliverables to work on.

在本阶段,你将基于已经完成的成果,继续开发 2016 年中国技能大赛的应用。如果你未能全部完成上一阶段的可交付成果,现在不要做了,因为你有新的可交付成果需要完成。

## INSTRUCTIONS TO THE COMPETITOR

### 向选手的说明

By the end of this session, you will need to have the following deliverables ready to submit so that the Marathon Skills system will be finished on time.

在本阶段结束时,你需要交付以下可交付成果,以便所开发的系统能够按时完成。

Make sure that you follow the provided style guide throughout all parts of the system.

确保在整个系统开发中都遵循风格指引。

Make sure that you provide appropriate validation and error messages throughout all parts of the system.

确保在整个系统开发中提供合适的验证和错误提示信息。

Make sure that all relevant buttons/links are working at the end of the session.

确保在本阶段末时,所有相关的按钮/链接都运转正常。

Make sure that you use appropriate naming conventions for all parts of the system as needed.

确保在整个系统中都按照需要来使用合适的命名规范。

## DELIVERABLES (SESSION 4)

### 可交付成果 (第 4 阶段)

#### 4.1 CREATE “DRAW LOTS”

##### 创建“抽签”

##### CREATE “DRAW LOTS”

##### 创建“抽签”

Create “Draw Lots” form. Please refer to Figure 4.1 for the sketch layout. When a judge logs in, display in the form the skill that he/she judges in current Event. The Jury President can draw lots to decide the workstation numbers of competitors in the skill that he/she judges in current Event. Common judges do not have this authority.

创建 “Draw Lots” 界面，请参照示意图 Fig4.1。裁判人员登录后，在界面上显示其在本届赛事中执裁的技能。仅裁判长具有抽签决定本届赛事中他执裁的技能中选手的工位号的权限。

“Draw Lots” button and “Save Lots Result” button can be used only when

the Jury President logs in; Or else the 2 buttons cannot be used. 仅当裁判长登录时，“Draw Lots” 和 “Save Lots Result” 按钮可用；否则不可用。 For

Individual Skills, contents displayed in the data grid include: Competitor Number, Competitor Name, Province, Workstation Number.

若是个人技能，数据网格中显示的内容包括：参赛证号,参赛者姓名,省份,工位号。

For Team Skills, contents displayed in the data grid include: Team Member:

“Name1;Name2;Name3”, Province, Workstation Number.

若是团队技能，数据网格中显示的内容包括：团队成员(格式为

“Name1;Name2;Name3),省份,工位号。

Records in the data grid should be displayed in ascending order according to Competitor Number or Team Member, and the total number of records should

---

be shown above the data grid. When the form is opened, if all the competitors or

teams in the skill have their workstation numbers, “Draw Lots” button and “Save Lots Result” button are disabled. 数据网格中的记录以参赛证号或团队成员正序显示，在数据网格上方显示记录的总数量。

When the form is opened, if all the competitors or teams in the skill have workstation numbers, then “Draw Lots” button and “Save Lots Result” button are disabled.

界面被打开时，若本技能所有参赛者或参赛团队都具有工位号，则 “Draw Lots” 按钮和 “Save Lots Result” 按钮不可用。

Workstation numbers will be generated randomly by drawing lots and displayed in the data grid in a timely manner when “Draw Lots” button is clicked. Workstation numbers will be randomly generated once every time “Draw Lots” button is clicked. The information of the generated workstation numbers will be saved to the database when “Save Lots Result” button is clicked. After the information is saved, drawing lots cannot be conducted again.

单击 “Draw Lots” 按钮，可以随机抽签生成工位号，并及时显示在数据网格中。每单击一次 “Draw Lots” 按钮，工位号随机生成一次。单击 “Save Lots Result” 按钮，将生成的工位号信息保存在数据库中。保存之后，不可以再次抽签。

If “Draw Lots” button in “Judger Menu” form is clicked by the user, redirect to this form.

如果用户单击 “Judger Menu” 界面中的 “Draw Lots” 按钮，将会转到此界面。

Draw Lots

Skills: XXXXXX

Total Numbers: XXX

Field1	Field2	Field3	
...	...	...	
...	...	...	

Draw Lots

Save Lots Result

Fig4.1 The Sketch Layout of Draw Lots

## 4.2 CREATE "INPUT SCORE"

### 创建“输入分数”

#### CREATE "INPUT SCORE"

### 创建“输入分数”

Create "Input Score" form. Please refer to Figure 4.2 for the sketch layout. This

form allows the Jury President to input or modify scores. When common judges open this form, "Save" button is in the state of "Disabled".

创建 "Input Score" 界面，请参照示意图 Fig4.2。此界面允许裁判长录入或修改成绩。普通裁判打开这个界面时，“Save”按钮为不可用状态。

Load current Event and the skills that the Jury President judges in the form. The information in the data grid will be displayed in ascending order by Competitor Number or Team Member.

在界面上加载当前赛事及裁判长执裁的技能。数据网格中的信息以参赛证号或团队成员正序显示。

Event: current event. Format: "Year held-Event Name"

---

Event :当前赛事。格式为 “举办年份-赛事名称” 。

Skills: Format: “Skill Number-Skill Name”

Skills : 技能。格式为 “技能编号-技能名称” 。

Display the information of competitors or teams in the data grid of A.

在区域 A 数据网格中显示参赛者或参赛团队信息。

For Individual Skills, contents displayed in the data grid include:

若是个人技能，数据网格中显示的内容包括：

- Competitor Number
- 参赛证号
- Competitor Name
- 参赛者姓名
- Province
- 省份
- Workstation Number
- 工位号
- Score
- 成绩

For Team Skills, contents displayed in the data grid include:

若是团队项目，数据网格中显示的内容包括：

- Team Member: Format: Name1;Name2;Name3”
- 团队成员。格式为 “Name1;Name2;Name3” 。
- Province
- 省份
- Workstation Number
- 工位号
- Score



- 成绩

If the competitor or team does not have scores, display “--” .

若参赛者或参赛团队没有成绩，显示 “--” 。

When selecting one line of the data grid, load on the right of the form the name(s) of the competitor(s) or the team members as well as the score(s) for each module and the total scores that the competitor(s) or the team get in the selected line. The input scores should meet the following requirements:

选择数据网格中某一行，在窗体右侧加载该行参赛者姓名或团队成员姓名以及参赛者或参赛团队的各模块成绩与总成绩。录入的成绩需要满足下面的要求：

- Score should be in numeric type and cannot be negative.
- 成绩应为数值类型，不能为负值。
- Score should not be more than 100.
- 成绩不能超过 100。
- The total scores should be gained automatically which is the sum total of the scores of each module.
- 总成绩应是自动得到的，等于各模块成绩的总和。

By clicking “Save” button, score should be displayed in the data grid on the left in a timely manner, and be written into the data table.

点击 “Save” 按钮，成绩在左侧数据网格中及时显示，并写入数据表中。

If “Input Score” button in “Judger Menu” form is clicked by the user, redirect to this form.

如果用户单击 “Judger Menu” 界面中的 “Input Score” 按钮，将会转到此界面。

Input Score

Event: HeldYear-EventName

Skills: SkillsNo-SkillsName

(A)

Field1	Field2	Field3
...	...	...
...	...	...

Competitor Name

88.00

Save

Fig4.2 The Sketch Layout of Input Score

### 4.3 CREATE“VIEW RESULT”

#### 创建“查看比赛结果”

#### CREATE“VIEW RESULT”

#### 创建“查看比赛结果”

Create “View Result” form. Please refer to Figure 4.3 for the sketch layout. This form allows a judge to view results of skills events.

创建 “View Result” 界面，请参照示意图 Fig 4.3。此界面允许裁判查看技能比赛的结果。

Load current Event and the skills that the judge judges in the form.

在界面上加载当前赛事及裁判执裁的技能。

- Event: current event. Format: “Year held-Event Name”
- Event : 当前赛事。格式为 “举办年份-赛事名称” 。
- Skills: judged skills. Format: “Skill Number-Skill Name”
- Skills : 执裁的技能。格式为 “技能编号-技能名称” 。

Display results ranks of competitors or teams in ascending order.

---

显示参赛者或参赛团队的比赛结果排名，根据排名正序显示。

For Individual Skills, contents displayed in the data grid include:

若是个人技能，数据网格中显示的内容包括：

- Rank
- 排名。
- Competitor Number
- 参赛证号。
- Competitor Name
- 参赛者姓名。
- Province
- 省份。
- Workstation Number
- 工位号。
- Results of Module 1
- 模块 1 成绩
- Results of Module 2
- 模块 2 成绩
- ...
- Results of Module n
- 模块 n 成绩
- Total Results
- 总成绩。

For Team Skills, contents displayed in the data grid include:

若是团队项目，数据网格中显示的内容包括：

- Rank

- 排名。
- Team Member. Format: “Name1;Name2;Name3”
- 团队成员。格式为 “Name1;Name2;Name3” 。
- Province
- 省份。
- Workstation Number
- 工位号。
- Results of Module 1
- 模块 1 成绩
- Results of Module 2
- 模块 2 成绩
- ...
- Results of Module n
- 模块 n 成绩
- Total Results
- 总成绩。

If the competitors or teams have no scores, display “--” for score and rank.

如果参赛者或参赛团队没有成绩，成绩和排名均显示 “--” 。

If multiple competitors or teams have the same scores, they have the same rank.

e.g.

如果多位参赛者或参赛团队成绩相同，则他们的排名也相同。如：

RANK 排名	SCORE 成绩
1	80.5
2	75.5
2	75.5

If “View Result” button in “Judger Menu” form is clicked by the user, redirect to this form.

如果用户单击 “Judger Menu” 界面中的 “View Result” 按钮，将会转到此界面。

Scores that are searched out can be printed by clicking “Print” button.

Please refer to the deliverable 4.4 for the information of “Print” button.

单击 “Print” 按钮，可以打印查询出的成绩。关于 “Print” 按钮的信息，请参考交付成果 4.4。

View Result

Event: HeldYear-EventName Skills: SkillsNo-SkillsName

Field1	Field2		

Print

Fig 4.3 The Sketch Layout of View Result

#### 4.4 CREATE “PRINT SCORE”

##### 创建“打印成绩”

##### CREATE “PRINT SCORE”

##### 创建“打印成绩”

Create “Print Score” form. Please refer to Figure 4.4 for the sketch layout. This form allows a judger to print scores searched out from “View Result”

form. 创建 “Print Score” 界面，请参照示意图 Fig 4.4。此界面允许裁判打印

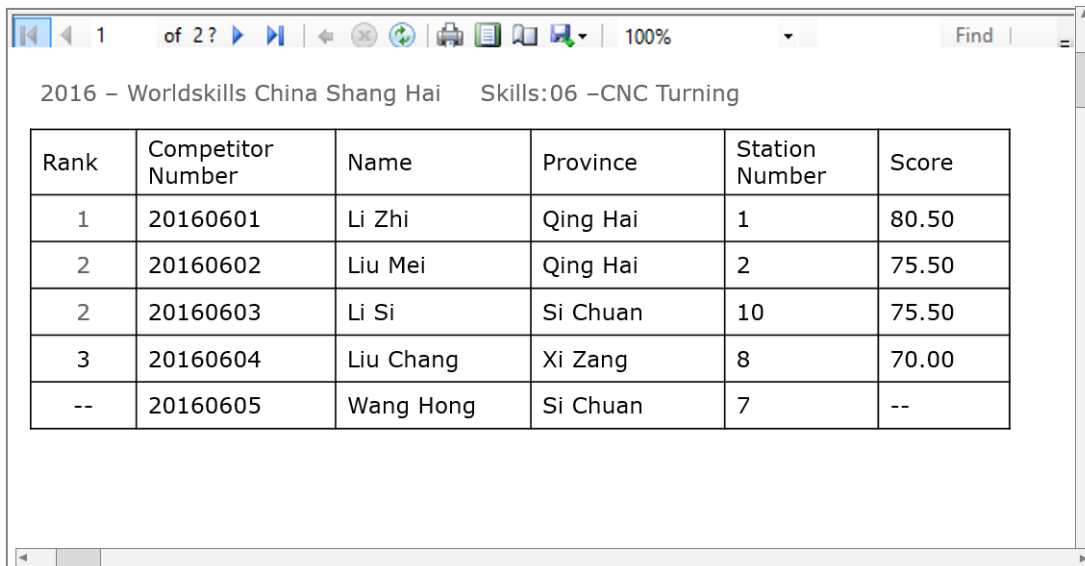
---

“View

Result” 界面查询出的成绩。

If “Print Score” button in “View Result” form is clicked by the user, redirect to this form.

如果用户单击 “View Result” 界面中的 “Print Score” 按钮，将会转到此界面。



The screenshot shows a web browser window with the following content:

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Rank	Competitor Number	Name	Province	Station Number	Score
1	20160601	Li Zhi	Qing Hai	1	80.50
2	20160602	Liu Mei	Qing Hai	2	75.50
2	20160603	Li Si	Si Chuan	10	75.50
3	20160604	Liu Chang	Xi Zang	8	70.00
--	20160605	Wang Hong	Si Chuan	7	--

Fig 4.4 The Sketch Layout of Print Score

## 4.5 TESTING

### 测试

#### TESTING

#### 测试

You have been asked to complete some testing on the modules of the application that have been developed.

你需要完成对已经开发的系统的一些功能模块的测试。

Use the provided testing template to define 5 test cases that test any of the forms within your application, e.g. Login, My Profile, Import Volunteers and Input Score etc. Make sure that you fill in all relevant parts of the testing template for each test case. Your documentation must make it obvious which part of the

application you are testing.

使用所提供的测试模板来定义 5 个测试用例,测试你的应用中的任何窗体。如:登录,我的档案,导入志愿者,录入成绩等。确保你对每个测试用例的测试模板都填满全部相关的内容。你的文档必须表明你正在测试该应用的哪个部分。

It is acceptable if your tests fail, as that is still a valid test case. You do not need to fix up any issues that are found using the test cases.

如果你的测试失败了,这是可接受的,因为那也仍然是一项有效的测试用例。你不需要修补任何在使用测试用例中发现的问题。

#### 4.6 CLIENT INTERACTION TASK

##### 客户互动任务

##### CLIENT INTERACTION TASK

##### 客户互动任务

During this session, you will be called to attend a short (3 minute) meeting with the client. You must act professionally throughout the meeting. The client (marking team) will have a copy of your work from previous sessions.

在本阶段,你将被叫去参加与客户的一个简短的(3分钟)会面。你必须在整个会面过程中表现出专业性。客户(评分组)手里有你之前几个阶段所做的工作的复件。

The meeting agenda describes what will be covered in the “client interaction” meeting.

会议方案描述了在“客户互动”会面中所包含的内容。

Follow the meeting checklist to make sure that you act professionally throughout the meeting.

遵照会议清单以确保你在整个会面过程中表现专业。



---

## 4.7 PRESENTATION

### 演示文稿

#### PRESENTATION

#### 演示文稿

You will need to have prepared a PowerPoint presentation that shows all aspects

of your system to the client. Requirements are as follows:

你需要准备一份 PPT 演示文件，向客户展示你系统的所有方面。要求如下：

- Your presentation should show all parts of the system. Use screenshots and make sure that the presentation indicates the flow from one part to another. Perhaps not all parts of your system work perfectly. Do not worry about this, but just make sure that you still show how each part links to the next. If necessary just create a dummy window.
- 应展示出你所开发的系统的所有部分。使用截屏并确保展示能够流畅地表现出部分之间的衔接。若某个功能你未完成，可创建一个虚拟的窗体。
- Make sure that you follow the provided style guide in your presentation (fonts and colours).
- 确保你在演示文稿中遵循了所提供的风格指引（字体和颜色）。
- Make sure your presentation is professional and complete.

- 
- 确保你的演示文稿是专业的和完整的。