

# 第 50 屆全國技能競賽暨第 46 屆 國際技能競賽國手第一階段選拔賽



## 資訊技術（軟體設計）職類 競賽試題及評分彙總表

### 競賽及評分項目

<input type="checkbox"/> 商業資料建置 EngTyping	<input type="checkbox"/> 資料處理分析與簡報設計 DA&PPT Design	<input type="checkbox"/> 系統分析與資料庫設計 SA&DB Design
<input checked="" type="checkbox"/> 商用軟體設計一 Software Design 1	<input type="checkbox"/> 商用軟體設計二 Software Design 2	<input type="checkbox"/> 行動 App 設計 App Design

選 手 編 號：\_\_\_\_\_

抽籤崗位號碼：\_\_\_\_\_

選 手 姓 名：\_\_\_\_\_

總 分：\_\_\_\_\_

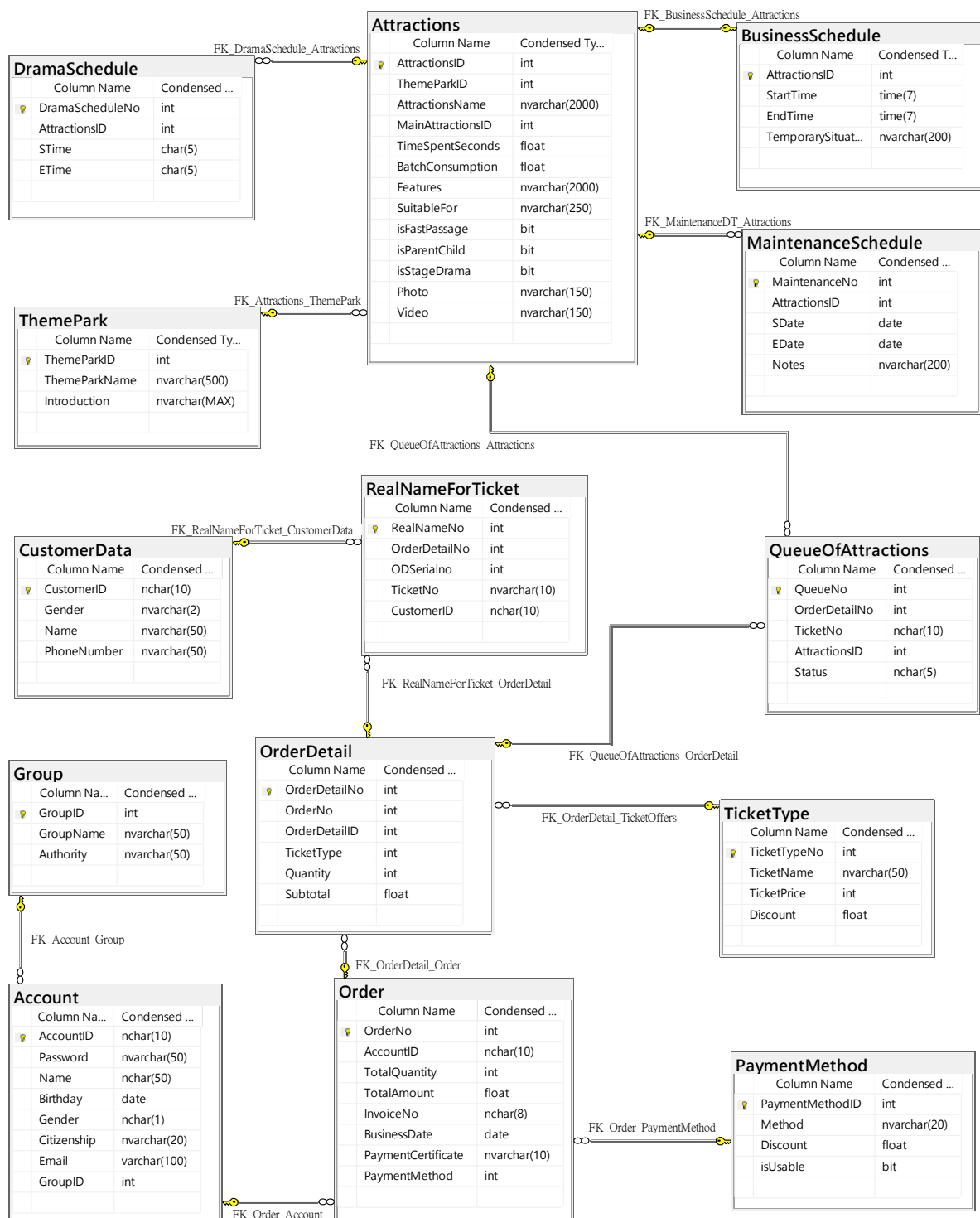
評 分 老 師：\_\_\_\_\_

# Session 4 Management system design for “Shanghai Disneyland Resort Dynamic Information Board” (DisneySH\_DIB\_System)

## Scenario and Database Schema

Half a year ago, your company’s system analysts and database engineers started interviewing relevant employees of Shanghai Disneyland Resort.

According to the systems analysis and database design results, they designed a MS SQL database “DisneySHAns.bak” and provided on Session 4. Following diagram is the Database relationship diagram for this system.



ThemePartyOfMonth		
	Column Name	Condensed T...
💡	ThemeParty	int
	TPContent	nvarchar(100)
	TPYearMonth	nchar(7)

WeatherData		
	Column Name	Condensed ...
💡	WeatherNo	int
	Datetime	datetime
	ChanceOfRain	float
	Temperature	char(10)
	Humidity	float

COVID		
	Column N...	Condensed ...
💡	COVIDNo	int
	Region	nchar(20)
	Country	nchar(50)
	Cases	float
	Deaths	float
	Pic	nchar(500)

Advertisement		
	Column Name	Condensed Ty...
💡	AdvertisementNo	int
	Title	nvarchar(100)
	ADContent	nvarchar(MAX)
	Second	float
	ADStartDT	datetime
	ADEndDT	datetime
	ADType	nvarchar(50)
	SingularDouble	nchar(1)

Please use Visual Studio 2019 C # design tools with MS SQL 2019 database

”*DisneySH\_ANM.Bak* ” (**ANM**: Your Workstation Number), according to task descriptions to design a Client-Server desktop application, including system processes, user interface and detail functions.

This system “**Shanghai Disneyland Resort Dynamic Information Board System**” design plan or execution file named as “*DisneySH\_DIB\_System*”. This system will be deployed to Shanghai Disneyland Resort to provide visitors enquiries and self-service. Please design the easy-to-operate main screen and the user interface of each function module, and connect to the SQL database. Visitors could operate the following functions and the App system that will be provided in the future.

## Function Menu and Sample of User Interface

### 1. Back-end System for Resort Manager and Administrator

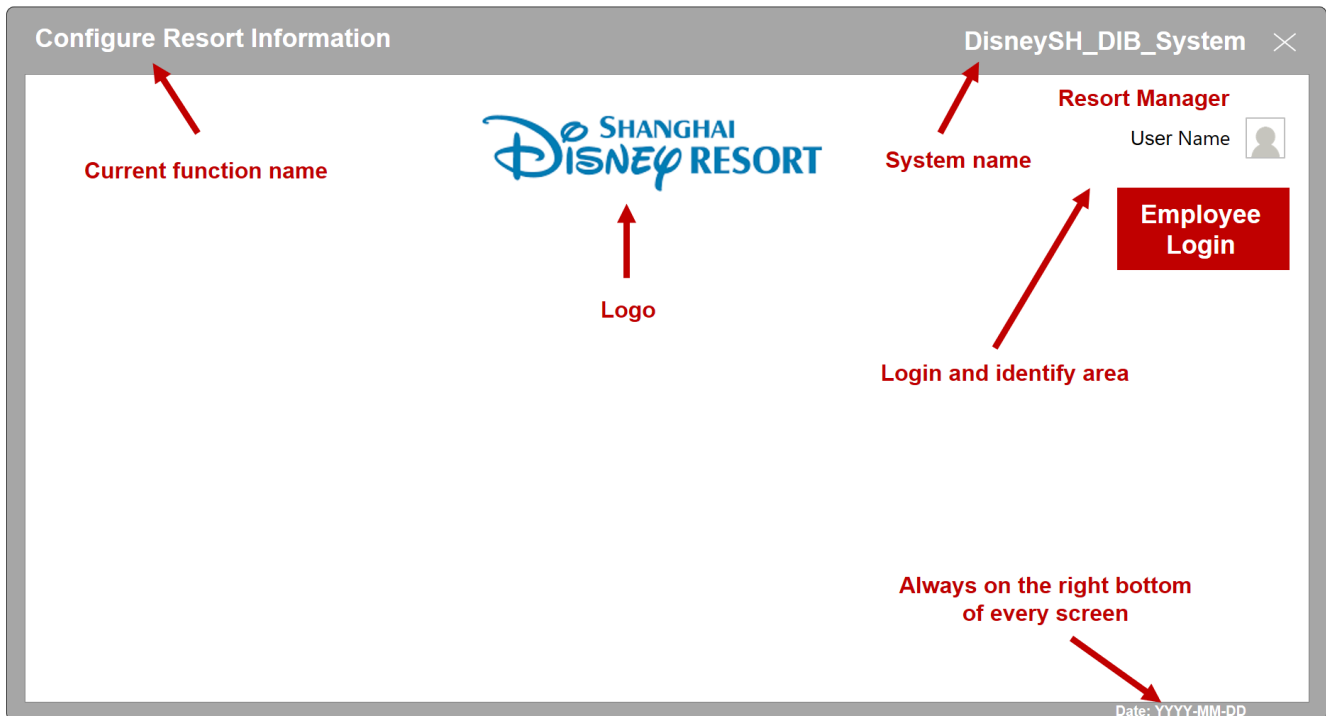
#### Back-end Management Functions

- **Configure Resort Information**
  - About Shanghai Disneyland Resort
  - Travel Information
  - Tickets and Passes
  - Introduction to Attractions
  - Daily Drama Schedule
  - Daily Amusement Facilities Schedule
- **Configure Linking Data Source**
  - News
  - Weather forecast
  - Number of visitors
- **Configure Dynamic Information Board**
  - Shanghai Disney Resort Broadcast
  - Self-Operation Mode
  - Dynamic Rotation Mode
- **Statistics and Reports**
- **Member Management**

#### Front-end Functions

Please refer to page 3~4 to get the requirements of the Front-end functions.

According to the requirements of the **Back-end management Functions**, please obey following diagram instruction (marked by red arrow) to design user interface. In blank area, show your creativity to design easy-to-operate system user interfaces.



Unless there are special instructions in user interfaces of the front-end functions, the instruction was marked by red arrow in above diagram must also be obeyed in user interfaces of the front-end system function.

## 2. Front-end Functions for Visitors and Members

### (1) Dynamic Information Board (Self-Operation Mode)

#### ● Introduction

- About Shanghai Disneyland Resort
- Travel Information
- Tickets and Passes
- Introduction to Attractions
- Daily Drama Schedule
- Daily Amusement Facilities Schedule

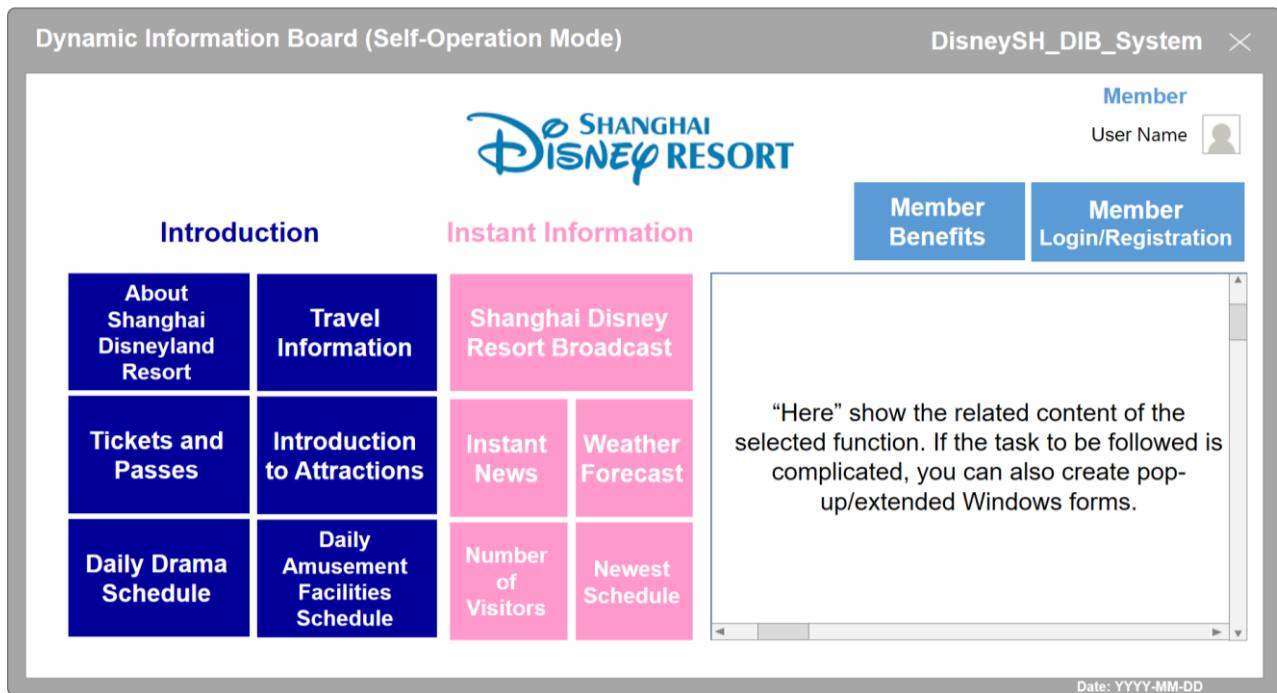
#### ● Instant Information

- Shanghai Disney Resort Broadcast
- Instant News
- Weather Forecast
- Number of Visitors
- Newest Schedule (Drama, Amusement Facilities)

#### ● Member Area

- Member Login/Registration
- Member Benefits

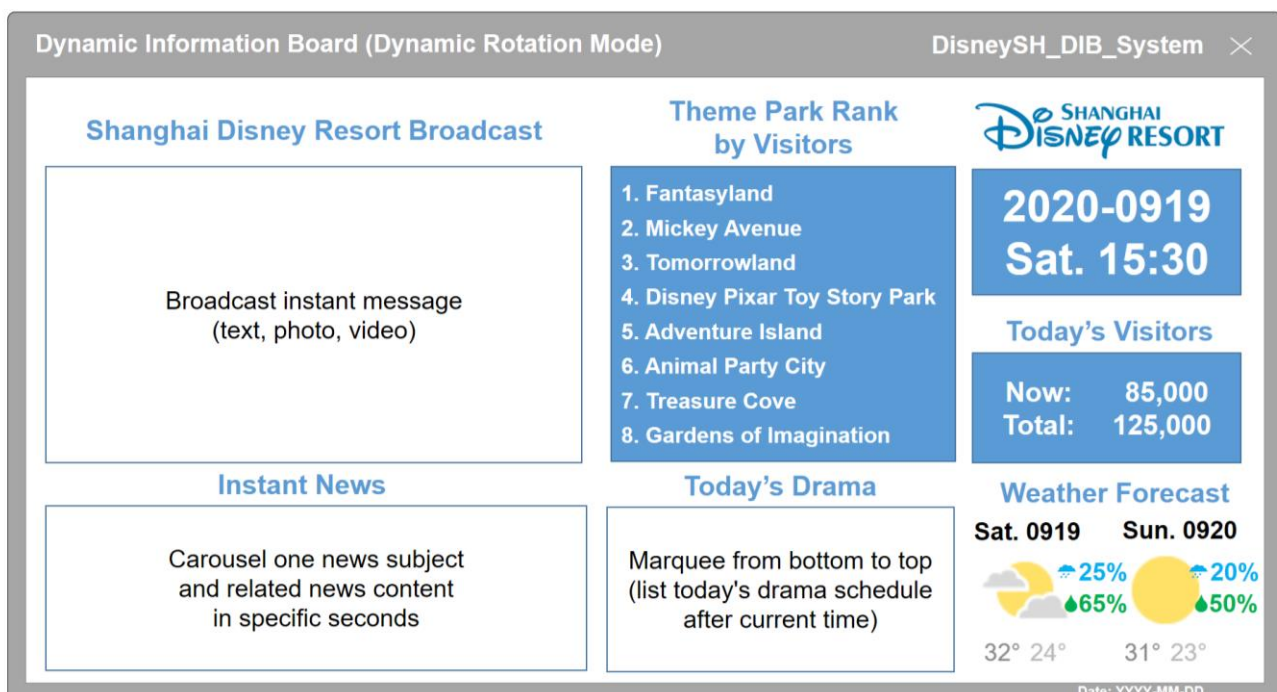
According to the requirements of the Front-end functions, please refer to following diagram to design easy-to-operate “**Dynamic Information Board (Self-Operation Mode)**” system user interfaces.



## (2) Dynamic Information Board (Dynamic Rotation Mode)

- Shanghai Disney Resort Broadcast
- Instant News
- Theme Park Rank by Visitors
- Today's Drama
- Today's Data and Time
- Today's Visitors
- Weather Forecast

According to the requirements of the Front-end system, please refer to following diagram to design an easy-to-operate “**Dynamic Information Board (Dynamic Rotation Mode)**” system user interface.



User interface must contain at least the following requirement lists:

**Precautions:**

1. You are request to refer provided MS SQL database to design your user interface, including Tables, Fields, and data records.
2. Shanghai Disneyland Resort provide "*DisneySH\_UI\_Style Guide.docx*" and some image files inside the folder "*Software Design 1\Data*" for your design work. Using Shanghai Disneyland Resort Logo, UI color and style need to match with them.
3. Different user permissions can use the same user interface, but for data browsing, searching (querying), setting, deleting and other permissions, there will be the difference.
4. To facilitate the management of all user interface, it is recommended to each user interface is numbered on caption.
5. In order to manage and maintain those user interfaces, naming of objects on forms and user interfaces must be easy to interpret.
6. While you design detail processes and functions of user interface, you need to consider about usability for mouse and keyboard operation, anti-mistake, navigation hints, and so on.
7. You could modify or create new database Table accompanied with your system designing task.
8. You will get more score if all the user interfaces design is completely and friendly.
9. Save your Visual Studio 2019 C # designed project name as "*DisneySH\_DIB\_System*".
10. Please write a "*Readme.txt*" to indicate the path and file name of your newest executive file (\*.exe).

**Note: Deduct 2 if file name is mistake.**

## Session 4 Marking Sheet

Software Design 1 Task Descriptions		Max Score	Actual Score
Please design the browsing interface and build the information required for the Back-end management functions (for Group “ <b>Resort Manager</b> ”) of Shanghai Disneyland Resort Dynamic Information Board System.			
(1)	<p>“Shanghai Disneyland Resort Dynamic Information Board System” design plan or execution file name “<i>DisneySH_DIB_System</i>” is correct (<b>deduct 2.0 if mistake</b> ), the link and backup SQL database file name is correct (<b>deduct 2.0 if mistake</b> )</p> <p>”<i>DisneySH_ANM.Bak</i> ” (<b>NM</b>: Your Workstation Number)</p> <p>A “<i>Readme.txt</i>” to indicate the path and file name of your newest executive file (*.exe) (<b>deduct 2.0 if mistake</b> )</p>	0	
(2)	<p><b>Resort Manager:</b> Design on “Main screen“ user interface for “Back-end Management Functions” is completely and friendly.</p> <p>Special request for every screen, including:</p> <ul style="list-style-type: none"> <li>● System name, current function name, and Logo. (0.5)</li> <li>● Information of current date. (0.5)</li> <li>● UI and object linking to “Configure Resort Information”. (0.5)</li> <li>● UI and object linking to “Configure Linking Data Source”. (0.5)</li> <li>● UI and object linking to “Configure Dynamic Information Board”. (0.5)</li> <li>● UI and object linking to “Statistics and Reports”. (0.5)</li> <li>● UI and object linking to “Member Management”. (0.5)</li> <li>● Function button “Employer Login” on the right-top side. (0.5)</li> </ul> <p><b>Hint:</b> It is different from Front-end functions.</p> <p>Deduct 0.5 on each mismatch or mistake for every above-mentioned function.</p>	4	
(3)	<p><b>Resort Manager:</b> Design UI and Function for “Employee Login” for various user</p> <p>Design UI and functions of “Employee Login“ are completely and friendly, including:</p> <ul style="list-style-type: none"> <li>● Login UI, including: <ul style="list-style-type: none"> <li>- System Name, Logo, User’s Login ID and password. (0.5)</li> <li>- Create Employee’s account. (1.0)</li> </ul> </li> <li>● Verify User’s Login ID must unique in this system. (1.0)</li> <li>● Verify User’s passwords must use a strong password rule. (2.0) <ul style="list-style-type: none"> <li>- At least 8 characters.</li> <li>- Uppercase English letter</li> <li>- Lowercase English letter</li> <li>- Numeric</li> <li>- Symbol</li> </ul> </li> </ul>	7.5	



Software Design 1 Task Descriptions		Max Score	Actual Score
	<ul style="list-style-type: none"> <li>● Edit own “<b>Personal Information Management (PIM)</b>”, every input field include format checking. <b>(1.0)</b> <ul style="list-style-type: none"> <li>- Name</li> <li>- Birthday</li> <li>- Gender</li> <li>- Citizenship</li> <li>- Email</li> </ul> </li> <li>● Administrator could create new account of Group “<b>Resort Manager</b>”. <b>(0.5)</b></li> <li>● Extend “<b>Fields</b>” of Table “<b>Account</b>” in SQL database, and create 2 users’ data of Group “<b>Resort Manager</b>” to make sure your design is correct. <b>(1.0)</b></li> <li>● Create 2 users account of Group “<b>Resort Manager</b>” with <b>PIM</b> in database and save their users account as filename “<i>Employee Login Account.txt</i>”, including: ID, Password, user permissions group. <b>(0.5)</b></li> </ul> <p>Deduct 0.5 on each mismatch or mistake for every above-mentioned function.</p>		
(4)	<p><b>Resort Manager: UI and Function design of “About Shanghai Disneyland Resort”</b></p> <p>Please refer to data in folder “<i>Software Design 1\Data\Shanghai Disneyland Resort.docx</i>” to design “<b>Configure Resort Information</b>” user interfaces and related Link.</p> <p><b>Hint:</b> You don’t need to import all “<i>Shanghai Disneyland Resort.docx</i>” into database, you could design static page with control options to show indicated contents.</p> <ul style="list-style-type: none"> <li>● Object linking to “<b>About Shanghai Disneyland Resort</b>” and show related information (texts and photo). <ul style="list-style-type: none"> <li>- Show all related information (texts). <b>(0.5)</b></li> <li>- Show Shanghai Disneyland Resort Map  <i>"00 Shanghai Disneyland Resort Map.jpg"</i>  must include function of full view, zoom in, zoom out, and move the browsing area. <b>(2.0)</b></li> </ul> </li> <li>● Object linking to “<b>Travel Information</b>” and show related information (texts and photos). <ul style="list-style-type: none"> <li>- Show all related information (texts). <b>(0.5)</b></li> <li>- The font size and paragraph of the title and body text are easy to identify and read. <b>(0.5)</b></li> <li>- Show related photos on correct place. <b>(1.0)</b></li> </ul> </li> <li>● Object linking to “<b>Tickets and Passes</b>” and show related information (texts and photos). <ul style="list-style-type: none"> <li>- Show all related information (texts). <b>(0.5)</b></li> <li>- The font size, bullet, and paragraph of the title and body text are easy to identify and read. <b>(0.5)</b></li> <li>- Show all related table and content with correct font setting. <b>(2.0)</b></li> <li>- Show related photos on correct place. <b>(0.5)</b></li> </ul> </li> </ul>	16.0	

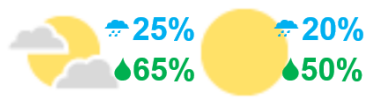


Software Design 1 Task Descriptions		Max Score	Actual Score
	<ul style="list-style-type: none"> <li>● Object linking to “<b>Introduction to Attractions</b>” and launch following assigned function (texts and photos).</li> <li>- Please refer to following diagram to design three linked drop-down box, it will show correct “<b>Main Attractions</b>”, “<b>Secondary Attractions</b>” while user select specific “<b>Theme Park</b>”. (2.0 )</li> </ul> <div style="display: flex; justify-content: space-around; margin: 10px 0;"> <div style="text-align: center;"> <b>Theme Park</b>  <input type="text" value="Fantasyland"/> </div> <div style="text-align: center;"> <b>Main Attractions</b>  <input type="text" value="Enchanted Storybook Castle"/> </div> <div style="text-align: center;"> <b>Secondary Attractions</b>  <input type="text" value="Golden Fairytale Fanfare"/> </div> </div> <ul style="list-style-type: none"> <li>- Each “<b>Theme Park</b>” has the correct corresponding “Theme Park Introduction” (1.0 )</li> <li>- There are total 43 amusement facilities for “<b>Main Attractions</b>” and “<b>Secondary Attractions</b>”. Each “<b>Main Attractions</b>” or “<b>Secondary Attractions</b>” has the correct corresponding photo. (2.0 )</li> <li>● Object linking to “<b>Daily Drama Schedule</b>” and show related information (texts).</li> <li>- Show all related information (texts). (0.5)</li> <li>- The font size, bullet, and paragraph of the title and body text are easy to identify and read. (0.5)</li> <li>- Show all related table and content with correct font setting. (1.5)</li> <li>- Show related photos on correct place. (0.5)</li> <li>● Object linking to “<b>Daily Amusement Facilities Schedule</b>” and show related information (texts).</li> <li>- Show all related information (texts). (0.5)</li> <li>- Show table and content with correct font setting. (0.5)</li> </ul> <p>Deduct 0.5 on each mismatch or mistake.</p>		
For Group “ <b>Resort Manager</b> ”, please design required API and related system management interface which could linking internal database or parsing specific external data source files (JSON, XML files).			
(5)	<p><b>Resort Manager: Design UI and Function for "Instant News" of “Configure Linking Data Source”</b></p> <p>Please refer to data in folder “<i>Software Design 1\Data\Advertisement.xml</i>” to design “<b>Instant News</b>” Web API, system management user interfaces and functions.</p> <ul style="list-style-type: none"> <li>● Design system management UI and functions to manage “<b>Instant News</b>” and API sources (IP or path, and name) that need to be linked. (2.0)</li> <li>● Please create Web API project name (site name, solution name) as “<i>DisneySH_API_NM</i>” (<b>NM</b>: Your Workstation Number) with endpoint “<i>InstantNewsService</i>”. Design API to parse and send exchange data in XML file “<i>Advertisement.xml</i>” on your Web server. (5.0)</li> </ul> <p><b>Note: Please use http protocol.</b></p> <ul style="list-style-type: none"> <li>● The management system could setting and update seconds for carousel. (1.0)</li> </ul>	9.0	

Software Design 1 Task Descriptions		Max Score	Actual Score
	<ul style="list-style-type: none"> <li>The management system needs to compare the difference between external data and the existing database, then update and store into SQL database. Newest data save and update to SQL database all are correct. (1.0)</li> </ul> <p>Deduct 1 on each mismatch or mistake for every above-mentioned function.</p>		
(6)	<p><b>Resort Manager: Design UI and Function for "Weather Forecast" of "Configure Linking Data Source"</b></p> <p>Please refer to data in folder "<i>Software Design 1\Data\Weather Forecast.json</i>" to design "<b>Weather Forecast</b>" Web API, system management user interfaces and functions.</p> <ul style="list-style-type: none"> <li>Design system management UI and functions to manage "<b>Weather Forecast</b>" and API sources (IP or path, and name) that need to be linked. (1.0)</li> <li>Please continue to develop your designed Web API, its project name (site name, solution name) is "<i>DisneySH_API_NM</i>" (<b>NM</b>: Your Workstation Number) with endpoint "<i>WeatherForecastService</i>". Design API to parse and send exchange data in JSON file "<i>Weather Forecast.json</i>" on your Web server. (5.0)</li> </ul> <p><b>Note: Please use http protocol.</b></p> <ul style="list-style-type: none"> <li>Please don't import JSON file "<i>Weather Forecast.json</i>" into SQL database. System must linking data via API and show them on assigned format. (1.0)</li> </ul> <p>Deduct 1 on each mismatch or mistake for every above-mentioned function.</p>	7.0	
(7)	<p><b>Resort Manager: Design UI and Function for "Number of Visitors" of "Configure Linking Data Source"</b></p> <p>Please refer to data in folder "<i>Software Design 1\Data\DisneySH_Visitors.json</i>" to design "<b>Number of Visitors</b>" Web API, system management user interfaces and functions.</p> <ul style="list-style-type: none"> <li>Design system management UI and functions to manage "<b>Number of Visitors</b>" and API sources (IP or path, and name) that need to be linked. (1.0)</li> <li>Please continue to develop your designed Web API, its project name (site name, solution name) is "<i>DisneySH_API_NM</i>" (<b>NM</b>: Your Workstation Number) with endpoint "<i>DisneySH_VisitorsService</i>". Design API to parse and send exchange data in JSON file "<i>DisneySH_Visitors.json</i>" on your Web server. (5.0)</li> </ul> <p><b>Note: Please use http protocol.</b></p> <ul style="list-style-type: none"> <li>The management system needs to compare the difference between external data and the existing database, then update and store into database. Newest data save and update to SQL database all are correct. (1.0)</li> </ul> <p>Deduct 1 on each mismatch or mistake for every above-mentioned function.</p>	7.0	

Software Design 1 Task Descriptions		Max Score	Actual Score
For Group “ <b>Resort Manager</b> ”, please design the required management interface to configure display mode of Shanghai Disneyland Resort Dynamic Information Board System.			
(8)	<p><b>Resort Manager: UI and Function design of “Configure Dynamic Information Board”.</b></p> <ul style="list-style-type: none"> <li>● Design UI and functions to manage and send “<b>Shanghai Disney Resort Broadcast</b>”, including: <ul style="list-style-type: none"> <li>- Title of Broadcast <b>(0.5)</b></li> <li>- Text Content of Broadcast <b>(0.5)</b></li> <li>- Image Content of Broadcast, and rotation seconds setting for several images. It will always keep to display if only one image. <b>(2.0)</b></li> <li>- Video Content of Broadcast, and setup to play “<b>Repeat</b>” or “<b>Repeat All</b>” for several videos. It will always keep to play “<b>Repeat</b>” if only one video. <b>(2.0)</b></li> </ul> </li> <li>● Design UI and management functions to setup following two “<b>Display Mode</b>”. <b>(0.5)</b> <ul style="list-style-type: none"> <li>- Self-Operation Mode</li> <li>- Dynamic Rotation Mode</li> </ul> </li> <li>● Extend “<b>Table</b>” and related “<b>Fields</b>” of SQL database to update and save those data. <b>(1.0)</b></li> <li>● Please refer to task (5) in page 8, design UI and management functions to setup rotation seconds for “<b>Instant News</b>”. It will always keep to display if only one news. <b>(0.5)</b></li> </ul> <p>Deduct 0.5 on each mismatch or mistake for every above-mentioned function.</p>	7.0	
(9)	<p><b>Resort Manager: Design UI and Function for "Self-Operation Mode" of “Configure Dynamic Information Board”.</b></p> <p>Please refer to page 4 to design UI and functions to manage and show “<b>Shanghai Disney Resort Dynamic Information Board System</b>” on “<b>Self-Operation Mode</b>”, including:</p> <ul style="list-style-type: none"> <li>● Function button with correct color and font type in “<b>Introduction</b>” area. <b>(0.5)</b> <ul style="list-style-type: none"> <li>- About Shanghai Disneyland Resort</li> <li>- Travel Information</li> <li>- Tickets and Passes</li> <li>- Introduction to Attractions</li> <li>- Daily Drama Schedule</li> <li>- Daily Amusement Facilities Schedule</li> </ul> </li> <li>● Function button with correct color and font type in “<b>Instant Information</b>” area. <b>(0.5)</b> <ul style="list-style-type: none"> <li>- Shanghai Disney Resort Broadcast</li> <li>- News</li> <li>- Weather Forecast</li> <li>- Number of Visitors</li> <li>- Newest Schedule</li> </ul> </li> </ul>	10.0	

Software Design 1 Task Descriptions		Max Score	Actual Score
	<ul style="list-style-type: none"> <li>● Design <b>button effect and show the related content</b> <ul style="list-style-type: none"> <li>- Lighter color while mouse over button. <b>(0.5)</b></li> <li>- Darker color while press button. <b>(0.5)</b></li> <li>- While press specific function button in “<b>Introduction</b>” area, show correct content on indicate area. <b>(3.0)</b></li> <li>- While press specific function button in “<b>Instant Information</b>” area, show correct content on indicate area. <b>(3.0)</b></li> </ul> </li> <li>● <b>Hint:</b> Newest Schedule: Show all Drama Schedule and Amusement Facilities Schedule after this moment today.</li> <li>● Special request for this screen, including: <ul style="list-style-type: none"> <li>- System name, current function name, logo, and information of current date. <b>(1.0)</b></li> <li>- User name, photo, and associated User Group. <b>(0.5)</b></li> <li>- Press [X] to “<b>Exit</b>” this function. <b>(0.5)</b></li> </ul> </li> </ul> <p>Deduct 0.5 on each mismatch or mistake for every above-mentioned function.</p>		
(10)	<p><b>Resort Manager: Design UI and Function for "Dynamic Rotation Mode" of “Configure Dynamic Information Board”.</b></p> <p>Please refer to page 4 to design UI and functions to manage and show “<b>Shanghai Disney Resort Dynamic Information Board System</b>” on “<b>Dynamic Rotation Mode</b>”, including:</p> <ul style="list-style-type: none"> <li>● Please refer to task (8) in page 10, show title and content is correct in “<b>Shanghai Disney Resort Broadcast</b>” display area. <ul style="list-style-type: none"> <li>- Title of Broadcast, Text Content of Broadcast are correct. <b>(0.5)</b></li> <li>- Image Content of Broadcast, and rotation seconds for several images is correct. It always keep to display if only one image. <b>(1.0)</b></li> <li>- Video Content of Broadcast to play with “<b>Repeat</b>” or “<b>Repeat All</b>” for several videos is correct. It always keep to play “<b>Repeat</b>” if only one video. <b>(1.0)</b></li> </ul> </li> <li>● Please refer to task (8) in page 10, show carousel news subject and related news content in specific seconds are correct in “<b>Instant News</b>” display area. <b>(2.0)</b></li> <li>● Design and show correct content (rank by visitors, sort by descending) in “<b>Theme Park Rank by Visitors</b>” display area. <b>(2.0)</b></li> <li>● Design and show correct content in “<b>Today’s Drama</b>” display area. <ul style="list-style-type: none"> <li>- List today's drama all schedule (start time, end time) after current time. <b>(1.0)</b></li> <li>- Marquee from bottom to top. <b>(1.0)</b></li> <li>- Identify drama schedule with “<b>Drama Name</b>” and related “<b>Theme Park Name</b>”. <b>(0.5)</b></li> </ul> </li> <li>● Design and show correct format and content of “<b>Today’s Data and Time</b>”. <b>(0.5)</b></li> <li>● Design and show correct content in “<b>Today’s Visitors</b>” display area. <ul style="list-style-type: none"> <li>- Now: the number of visitors still in the park. <b>(0.5)</b></li> </ul> </li> </ul>	17.0	

Software Design 1 Task Descriptions		Max Score	Actual Score
	<p>- Total: total number of visitors entering the park today (including those who have left). <b>(1.0)</b></p> <ul style="list-style-type: none"> <li>● Design and show correct content in “<b>Weather Forecast</b>” display area.</li> </ul> <p>- Weather information including: Weather of today and tomorrow, rain probability, humidity, high-low temperature. <b>(2.0)</b></p> <div style="text-align: center;"> <p><b>Weather Forecast</b></p> <p><b>Sat. 0919    Sun. 0920</b></p>  <p>32° 24°    31° 23°</p> </div> <p>- Please refer to data in folder “<i>Software Design 1\Data\Images\Weather Forecast</i>” to get image files. You also need to use symbol from font type “<b>Wingdings</b>” and “<b>Webdings</b>”. Show those information are correct in graphic. <b>(2.5)</b></p> <ul style="list-style-type: none"> <li>● Special request for this screen, including: <ul style="list-style-type: none"> <li>- System name, current function name, logo. <b>(0.5)</b></li> <li>- Information of current date. <b>(0.5)</b></li> <li>- User name, photo, and associated User Group, press [X] to “<b>Exit</b>” this function. <b>(0.5)</b></li> </ul> </li> </ul> <p>Deduct 0.5 on each mismatch or mistake for every above-mentioned function.</p>		

Software Design 1 Task Descriptions		Max Score	Actual Score
(11)	<p><b>Resort Manager: UI and Function design of “Statistics and Reports”.</b></p> <ul style="list-style-type: none"> <li>● Design UI and functions to query and create <b>“Statistics report of amusement facilities maintenance”</b>. <ul style="list-style-type: none"> <li>- By today or by specific interval. <b>(1.0)</b></li> <li>- Show the total number of repairs of each amusement facility by Stacked Bar Chart. <b>(2.0)</b></li> <li>- Show the total time of repairs of each amusement facility by Stacked Bar Chart. <b>(2.0)</b></li> <li>- Identify amusement facility with <b>“Attraction Name”</b>. <b>(0.5)</b></li> <li>- Create 100 test data to make sure your design is correct. <b>(2.0)</b></li> </ul> </li> <li>● Design UI and functions to query and create <b>“Statistics report of amusement facilities used number of people”</b>. <ul style="list-style-type: none"> <li>- By this moment, show the total queuing number of each amusement facility now by Bar Chart. <b>(1.5)</b> <b>Hint:</b> Status <b>“End”</b> is not included.</li> <li>- By this moment, show the Top 5 queuing number of each amusement facility now by Pie Chart. <b>(1.5)</b> <b>Hint:</b> Status <b>“End”</b> is not included.</li> <li>- Identify amusement facility with <b>“Attraction Name”</b> and related <b>“Theme Park Name”</b>. <b>(0.5)</b></li> <li>- Extend <b>“Table”</b> and related <b>“Fields”</b> of SQL database, and create test data to make sure your design is correct. <b>(1.0)</b></li> </ul> </li> <li>● Design UI and functions to query and create <b>“Statistics report of amusement facilities queuing time”</b> <ul style="list-style-type: none"> <li>- By today or by specific interval. <b>(0.5)</b></li> <li>- Show the total of Top 10 amusement facility queuing time by Bar Chart. <b>(2.0)</b></li> <li>- Identify amusement facility with <b>“Attraction Name”</b> and related <b>“Theme Park Name”</b>. <b>(0.5)</b></li> <li>- Extend <b>“Table”</b> and related <b>“Fields”</b> of SQL database, and create test data to make sure your design is correct. <b>(1.0)</b></li> </ul> </li> </ul> <p>Deduct 1 on each mismatch or mistake for every above-mentioned function.</p>	16.0	

Software Design 1 Task Descriptions		Max Score	Actual Score
<p>Please design an easy-to-operate main screen and user interface for each functional module, and link it to the SQL database.</p> <p>Group “<b>Guest</b>” or “<b>Member</b>” could operate the following functions.</p>			
(12)	<p><b>Guest and Member:</b> Design UI and Function for "Self-Operation Mode" of “Configure Dynamic Information Board”.</p> <p>Please refer to task (9) in page 10 to design UI and functions to show “<b>Shanghai Disney Resort Dynamic Information Board System</b>” on “Self-Operation Mode”.</p> <p>The following only explains the different designs required</p> <ul style="list-style-type: none"> <li>● [X] should be disable for Group “<b>Guest</b>” and “<b>Member</b>”. (0.5)</li> <li>● Function button “<b>Member Login/Registration</b>” and “<b>Member Benefits</b>” on the right-top side. (0.5) <b>Hint:</b> It is different from Back-end management functions.</li> <li>● Please refer to data ”<b>Tickets and Passes</b>” in folder “<i>Software Design 1\Data\Shanghai Disneyland Resort.docx</i>” to design UI and functions of “<b>Member Benefits</b>“, including: <ul style="list-style-type: none"> <li>- Member’s special price and Benefits (Key Features) of Silver Annual Pass. (0.5)</li> <li>- Member’s special price and Benefits (Key Features) of Gold Annual Pass. (0.5)</li> <li>- Member’s special price and Benefits (Key Features) of Diamond Annual Pass. (0.5)</li> </ul> </li> <li>● Design UI and functions of “<b>Member login/Registration</b>“ are completely and friendly, including: <ul style="list-style-type: none"> <li>- Login UI, including System Name, Logo, User’s Login ID and password, Member Registration. (0.5)</li> <li>- Verify User’s passwords must use a strong password rule. (0.5) <ul style="list-style-type: none"> <li>✧ At least 8 characters.</li> <li>✧ Uppercase English letter</li> <li>✧ Lowercase English letter</li> <li>✧ Numeric</li> <li>✧ Symbol</li> </ul> </li> </ul> </li> <li>● Verify User’s Login ID must unique in this system. (0.5)</li> <li>● Registration (Create) new or edit own “<b>Personal Information Management (PIM)</b>”, every input field include format checking. (0.5) <ul style="list-style-type: none"> <li>- Name</li> <li>- Birthday</li> <li>- Gender</li> <li>- Citizenship</li> <li>- Email</li> </ul> </li> <li>● Extend “<b>Fields</b>” of Table “<b>Account</b>” in SQL database, and create 3 users’ data to make sure your design is correct. (0.5)</li> </ul>	6.0	



Software Design 1 Task Descriptions		Max Score	Actual Score
	<ul style="list-style-type: none"> <li>● Create 3 users' account with <b>PIM</b> in database and save their users account as filename "<b>Member Login Account.txt</b>", including: ID, Password, user permissions group. (0.5)</li> <li>● Show correct "<b>Group</b>", "<b>User Name</b>", and "<b>User Photo</b>" on the right-top side while login successfully. (0.5)</li> </ul> <p>Deduct 0.5 on each mismatch or mistake for every above-mentioned function.</p>		
(13)	<p><b>Guest and Member: Design UI and Function for "Dynamic Rotation Mode" of "Configure Dynamic Information Board".</b></p> <p>Please refer to task (10) in page 11~12 to design UI and functions to show "<b>Shanghai Disney Resort Dynamic Information Board System</b>" on "<b>Dynamic Rotation Mode</b>".</p> <p>The following only explains the different designs required.</p> <ul style="list-style-type: none"> <li>● [X] should be disable for Group "<b>Guest</b>" and "<b>Member</b>". (0.5)</li> <li>● The display content and effect meet expectations in "<b>Shanghai Disney Resort Broadcast</b>" display area. (0.5)</li> <li>● The display content and effect meet expectations in "<b>Instant News</b>" display area. (0.5)</li> <li>● The display content and effect meet expectations in "<b>Theme Park Rank by Visitors</b>" display area. (0.5)</li> <li>● The display content and effect meet expectations in "<b>Today's Drama</b>" display area. (0.5)</li> <li>● The display content and effect meet expectations in "<b>Today's Visitors</b>" display area. (0.5)</li> <li>● The display content and effect meet expectations in "<b>Weather Forecast</b>" display area. (0.5)</li> </ul> <p>Deduct 0.5 on each mismatch or mistake for every above-mentioned function.</p>	3.5	
General common design descriptions			
(14)	<p><b>Administrator: UI and Function design of "Account Management".</b></p> <p>While Administrator login to system, they could use following functions:</p> <ul style="list-style-type: none"> <li>● Create new user's account. <ul style="list-style-type: none"> <li>- Create "<b>Personal Information Management (PIM)</b>". (0.5)</li> <li>- Assign User to specific "<b>Group</b>". (0.5)</li> </ul> </li> <li>● Edit existed User. <ul style="list-style-type: none"> <li>- Edit "<b>Personal Information Management (PIM)</b>". (0.5)</li> <li>- Enable and disable user's account. (0.5)</li> <li>- User of every Group could edit and save. (0.5)</li> <li>- Only user of Group "<b>Administrator</b>" and "<b>Resort Manage</b>" could change and assign "<b>Group</b>". Others User Group could read but couldn't change it. (0.5)</li> </ul> </li> </ul>	3.0	

Software Design 1 Task Descriptions		Max Score	Actual Score
	Deduct 0.5 on each mismatch or mistake for every above-mentioned function.		
(15)	Each user interface is numbered on caption. Deduct 0.1 on each mismatch or mistake.	0.5	
(16)	Using Shanghai Disneyland Resort Logo, UI color and style are matched with organizer needs. Deduct 0.2 on each mismatch or mistake.	0.5	
(17)	Naming of objects on forms and user interfaces all are easy to interpret. Deduct 0.1 on each mismatch or mistake.	0.5	
(18)	The usability for mouse and keyboard operation, function and navigation button, anti-mistake, navigation hints is good. Deduct 0.1 on each mismatch or mistake.	0.5	
	<b>Total</b>	<b>115</b>	