

Test Project

Mobile Applications Development

Module A Functionality

Day 1 A.M.

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Introduction

WorldSkills is holding the global WorldSkills Competition all over the world in October 2022. As the organizer of this competition, WorldSkills hopes to develop relevant apps to serve the audience who pay attention to this competition. The audience can sit at home, learn about WorldSkills, feel the atmosphere of the competition, and follow the dynamics of the competition through pictures and videos from the app.

The product manager has provided you with product wireframes for both phone and tablet versions. As a developer of mobile applications, your task is to develop corresponding apps based on the given wireframes according to specific development needs.

Description of project and tasks

The developer does not need to consider the aesthetics of the program interface and the position of the elements. The work can be inconsistent with the given wireframes, but the developer needs to properly consider the ease of use. The development task is divided into two parts depending on the devices.

	Part	Name	Competition Time	Marking Devices
✓	A.M.	Functionality (phone)	2.5h	Emulator: Pixel 2 or iPhone 8 Plus
	P.M.	Functionality (tablet)	2.5h	Emulator: Pixel C or iPad Pro (9.7-inch)

Application wireframes

Events List

All / Unread / Read

PIC	Title	Text
	Read	
PIC	Title	Text
	Unread	
PIC	Title	Text
	Unread	
PIC	Title	Text
	Unread	

Events Tickets Records

Events List

Event Details

Title

view counts

PIC	PIC	PIC
-----	-----	-----

Text

Events Tickets Records

Event Details

Event Details

PIC

Text

Events Tickets Records

Event-details-picture-bigger

Tickets List

Create a new ticket

Opening Ceremony Tickets

Jack

A6 Row7 Column9

Rose

A7 Row8 Column6

Closing Ceremony Tickets

Jack

Events Tickets Records

Tickets List

Ticket Create

Closing Ceremony

Input your name

Choose one picture

Preview picture

Create

Events Tickets Records

Ticket Create

Ticket Details

Ticket Picture

Ticket type: xxxxxx
Audience's name : xxxxxxx
Time: xxxx-xx-xx xx:xx
Seat: A6 Row7 Column9

Download

Events Tickets Records

Ticket Details

Records

Voice Record

Voice Play

Submit

Audios List

audio 1 ▶

audio 2 ▶

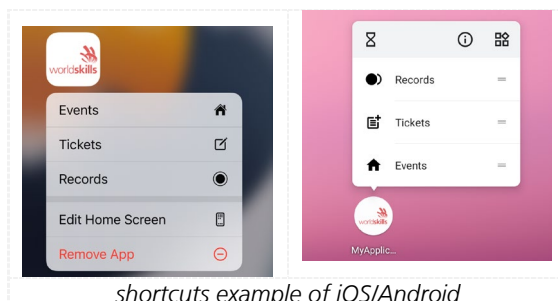
audio 3 ▶

Events Tickets Records

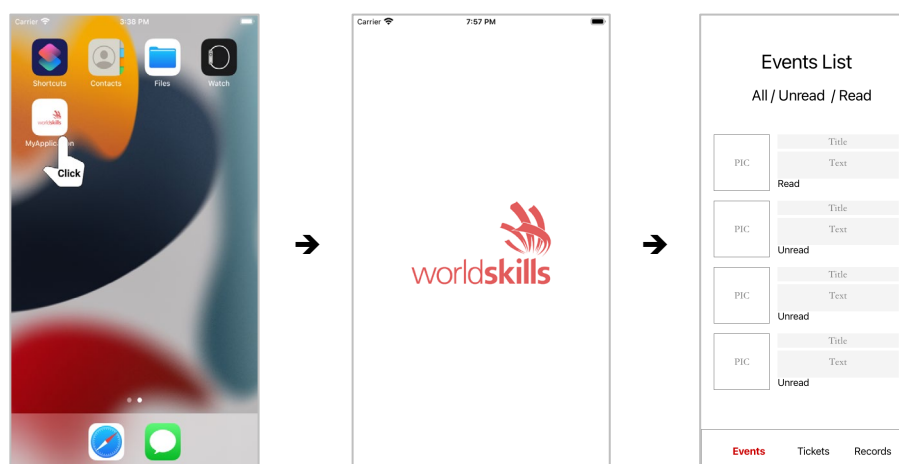
Records

General Demands

1. Finish the function of this application according to the demands.
 2. All text with quotation marks must be the same as the ***elements include***.
 3. The application should show the application icon (media-files/icons) on the system launcher.
 4. All of the pages should contain a navigation bar at the bottom.
- (a) Bottom navigation bar should include:
- 1) "Events" button, click to navigate to Page Events List;
 - 2) "Tickets" button, click to navigate to Page Tickets List;
 - 3) "Records" button, click to navigate to Page Records;
5. Create three application shortcuts* that can navigate to Page Events List, *Page Tickets*, *Page Records* of the application on the icon of launcher screen.
- *The shortcuts are the menu items when long-clicking the application icon.*



6. When the application cold starts*, the logo icon (icon.png) is displayed to replace the default white screen.
- *A cold start happens when the user launches the app either for the first time since booting or after killing the application.*



7. You need to make this application easy to use.

Pages Demands

1 Events List

1.1 Elements include:

1. Page title: "Events";
2. The top filter buttons: "All", "Unread" and "Read" ;
3. The list of events;
4. Each list item consists of picture, title, introduction and status of "Read" or "Unread".

1.2 Functional requirements:

1. The information of the events list should read from the content provided by **events_data.json**;
2. The introduction should be two lines. If it cannot be displayed completely, add "..." at the end of the second line.
3. Filter the data and show corresponding status by clicking the filter button of "All" / "Unread" / "Read";
4. Click each list item to navigate to the corresponding Page Event Details, and the item's status is no longer be "Unread".
5. The list items' status of "Read" and "Unread" should be stored correctly, its status can be locally stored, even restart the App.

Events List

All / Unread / Read

PIC	Title
	Text
	Read
PIC	Title
	Text
	Unread
PIC	Title
	Text
	Unread
PIC	Title
	Text
	Unread

Events
Tickets
Records

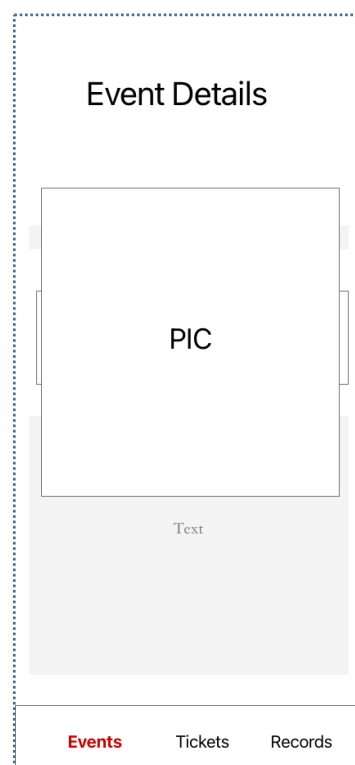
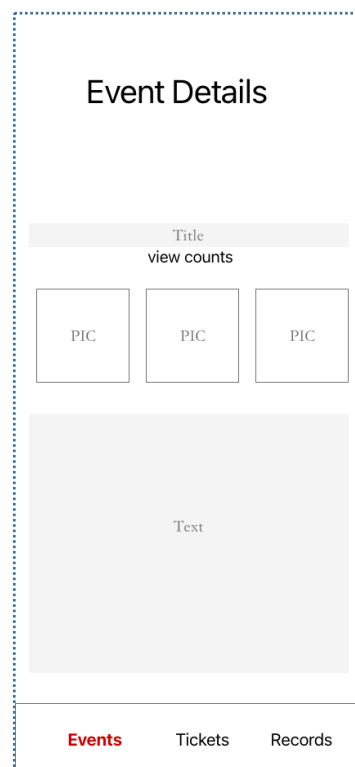
2 Event Details

2.1 Elements include:

1. Page title: "Event Details";
2. Event title;
3. Event thumbnail pictures group (3 pictures);
4. Event details text;
5. Event's view counts

2.2 Functional requirements:

1. Thumbnail pictures group content should be in accordance with the specify event by you clicked in previous page ;
2. View counts(default value is 0) ,accumulating one time per entry;
3. Popup a bigger-size picture by clicking the thumbnail pictures from the pictures group:
4. In the bigger-size picture area, slide to show the bigger-size picture of the other two thumbnail pictures.



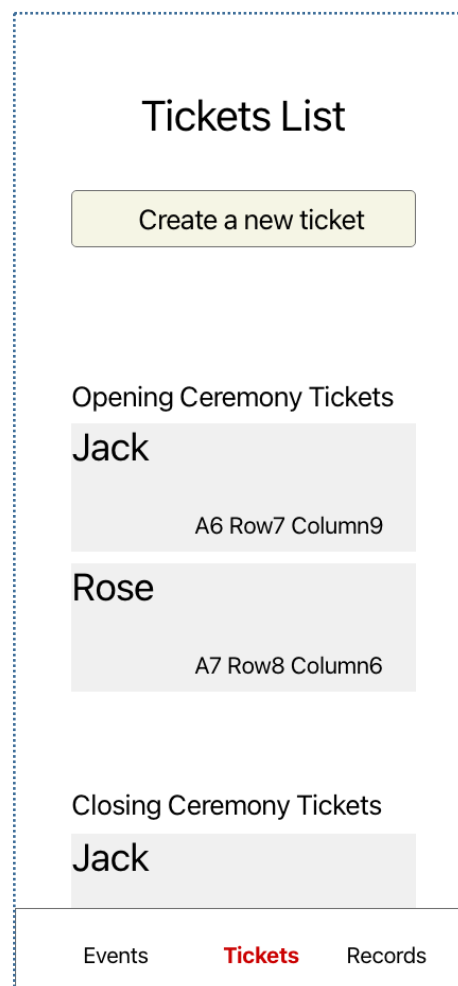
3 Tickets List

3.1 Elements include:

1. Page title: "Tickets List";
2. Button "Create a new ticket";
3. Tickets of Opening Ceremony;
4. Tickets of Closing Ceremony.

3.2 Functional requirements:

1. Click button "Create a new ticket" to navigate to the Page Ticket Create. After new ticket have been created, the new ticket will be listed in the Page Tickets List;
2. Tickets are group by their types;
3. The tickets item order can be changed by long clicking the item and dragging vertically but can not across types;
4. The tickets item can be deleted by swiping the item horizontally;
5. Tickets list can be locally stored, even restart the App after the order changed;
6. Click one ticket to navigate to Page Ticket Details;



4 Ticket Create

4.1 Elements include:

1. Page title: "Ticket Create";
2. Selector of "Opening Ceremony" / "Closing Ceremony";
3. Input field "Input your name";
4. Button "Choose one picture";
5. "Preview" area of the chosen picture;
6. Button "Create".

4.2 Functional requirements:

1. Choose a picture from phone photos by clicking "Choose one picture" button ;
2. Shows the chosen picture in preview area;
3. Click "Create" button to navigate to Page Tickets List;

Ticket Create

Closing Ceremony

Input your name

Choose one picture

Preview picture

Create

Events

Tickets

Records

5 Ticket Details

5.1 Elements include:

1. Page title: "Ticket Details";
2. Rectangular frame (outer frame of ticket);
3. Ticket Picture;
4. Ticket type;
5. Audience's name;
6. Time;
7. Seat;
8. Button "Download".

5.2 Functional requirements:

1. Ticket Picture is correct, base on which picture you chose before;
2. Ticket Type is correct, base on which type you chose before;
3. Audience's name is correct, base on what text you typed before;
4. "Time" displays the date and time when the ticket is created. The format should be: "YYYY-MM-DD HH:MM", e.g. "2022-10-13 10:32"
5. The format of the seat is "\$1\$2 Row\$2 Column\$2", where "\$1" is random character in "A/B/C", "\$2" is random number in 1-10;
6. Click the "Download" button to save the ticket (area in the rectangular frame) as a picture to the system photo gallery;
7. Show a **system** notification after saving a ticket picture successfully with text "Save Successfully".

Ticket Details

Ticket Picture

Ticket type: xxxxxx
Audience's name : xxxxxx
Time: xxxx-xx-xx xx:xx
Seat: A6 Row7 Column9

Download

Events
Tickets
Records

6 Records

6.1 Elements include:

1. Page title: "Records";
2. Voice Record Button;
3. Voice Play Button;
4. Submit Button;
5. Audios List;

6.2 Functional requirements:

1. Voice Play Button is disable before finishing the voice recording;
2. Submit Button is disable before finishing the voice recording;
3. Popup the audio-record permission request dialog at the first time of recording;
4. Click the Voice Record Button to record the audio;
5. Click the Voice Play Button to playback the audio that just recorded;
6. Click the Submit Button to submit the recording to audios list;
7. Show a dialog after submitting a recording successfully with text "Submit Successfully";
8. The Audios List should show all of the submitted audio;
9. Items of audio list can be played by clicking.

Records

Voice Record

Voice Play

Submit

Audios List

audio 1
▶

audio 2
▶

audio 3
▶

Events
Tickets
Records

Instructions to the Competitor

1. Please create the project with correct package name (Android)/ Organization Identifier (iOS). Naming convention: edu.ws2022.aXX.am
2. You should save the project in the folder: XX_Module_A_AM.
3. You should rename the generated apk (Android)/ app (iOS) file as XX_Module_A_AM.apk (Android)/ XX_Module_A_AM.app (iOS), and save it in the root of the XX_Module_A_AM folder.
4. The whole XX_Module_A_AM folder should be pushed to the provided remote Git repository.
5. Submit part A.M. in the morning and part P.M. in the afternoon, and the two parts will be marked independently;
6. Only works pushed to the remote Git server within the specified time will be marked.

Note: XX refers to your workstation code.

Marking Scheme

Module A AM		
No	Sub-criterion	Mark
1	Page Events List demands	1.3
2	Page Event Details demands	0.9
3	Page Tickets List demands	2.2
4	Page Ticket Create demands	1.5
5	Page Ticket Details demands	2.8
6	Page Records demands	2.5
7	General Demands	2.8
8	Judgement	1
	Total	15