Test Project

Mobile Applications Development

Module A Functionality

Day 1 P.M.

Submitted by:
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Contents

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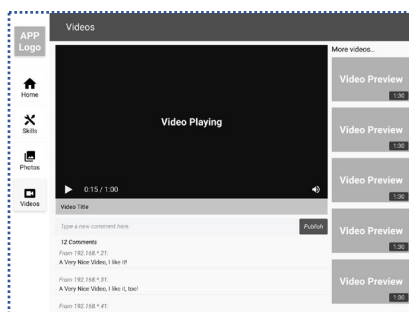
	Part	Name	Competition time	Marking devices
	A.M.	Functionality (phone)	2.5h	Emulator: Pixel 2 or iPhone 8 Plus
✓	P.M.	Functionality (tablet)	2.5h	Emulator: Pixel C or iPad Pro (9.7-inch)

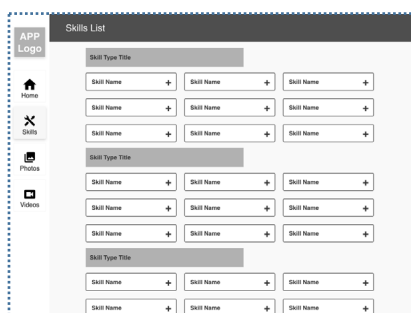The following is an overview of some of the wireframes. Please check the **media-files** for details.
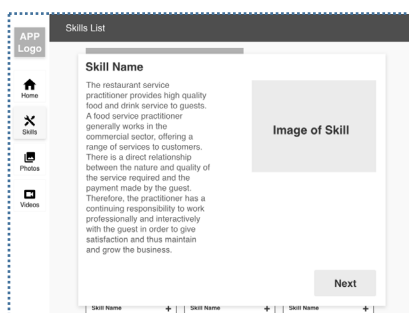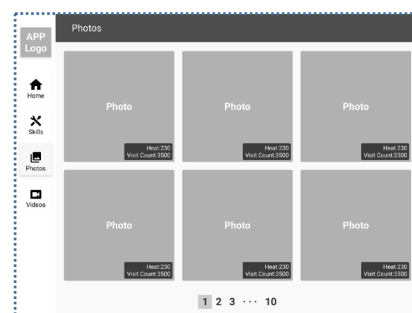
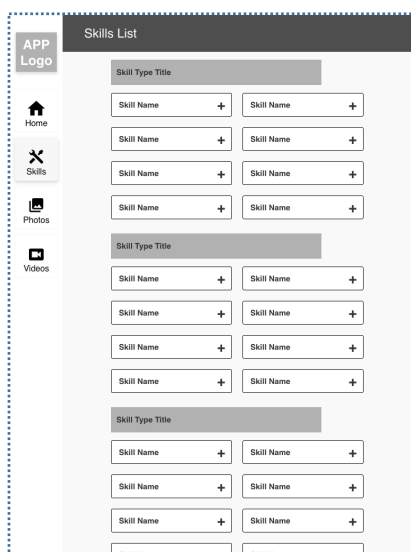# Application wireframes
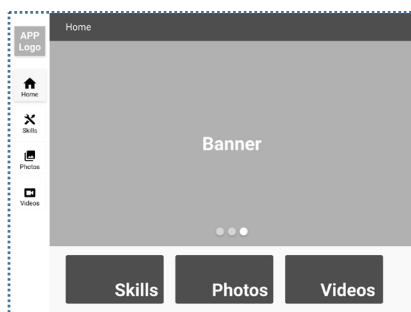
Home

Videos

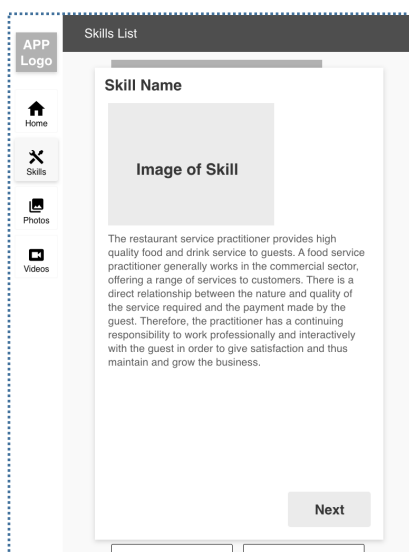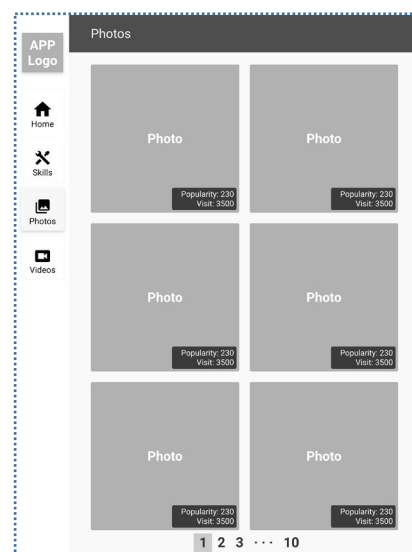*Skills-list*

Skill

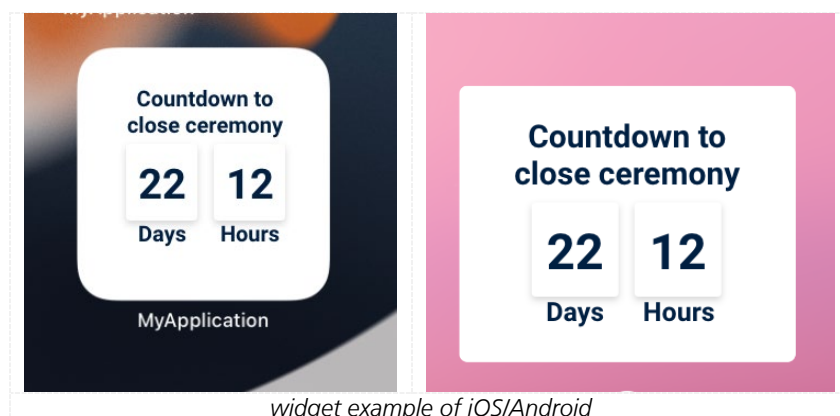*Photos*

Skill-list-portrait

Skill-portrait

Photos-portrait

General Demands

1. Finish the function of this application according to the demands.
2. The text in the elements must be the same as the text with quotation marks described in the Test Project.
3. All of the pages should contain a navigation bar on the left.

   (a) Left navigation bar:
      1) Application logo shows on the navigation bar;
      2) "Home" button with icon, click to navigate to Page Home;
      3) "Skills" button with icon, click to navigate to Page Skills-list;
      4) "Photos" button with icon, click to navigate to Page Photos;
      5) "Videos" button with icon, click to navigate to Page Videos;

4. In Page Skills-list, Page Skill, Page Photos, if the screen is rotated to the portrait mode, the page will be a layout like Page Skills-list-portrait, Page Skill-portrait, Page Photos-portrait;
5. Click the "Open WorldSkills Application" Button* on the web page "http://192.168.0.199:8080/api/worldskills-app" in phone's web browser to open this application.
   *The button is linked to the url: "wsapp://edu.ws2022.a2/app/worldskills"
6. Create a application widget of countdown timer, showing the content of "Countdown to close ceremony" with days and hours. The target event time of the countdown timer should be 2022-10-17 23:59:59.
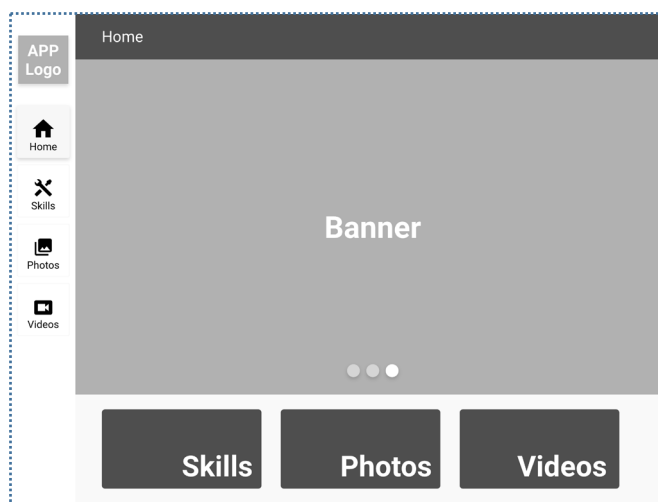

widget example of iOS/Android

Pages Demands

1 Home

1.1 Elements include:

1. Page title: "Home";
2. Pictures banner;
3. Button "Skills", "Photos", "Videos".

1.2 Functional requirements:

1. "Skills", "Photos", "Videos" buttons can navigate to the corresponding page;
2. Pictures banner automatically loops the 3 banner pictures provided in the media-files;
3. Each picture on the pictures banner should be shown for at least 1 second;
4. The direction of sliding pictures should maintain the same way from right to left, especially when the current picture is switched from the third one to the first one;
5. A dot indicator in picture banner to show which picture is being displayed.

2 Skills-list and Skill

2.1 Elements include:

1. Page title: "Skills List";
2. Titles of skills' types;
3. Lists of skill items;
4. Dialog box:

   (a) Image of Skill;
   (b) Skill Name;
   (c) Skill Description;
   (d) Next button.
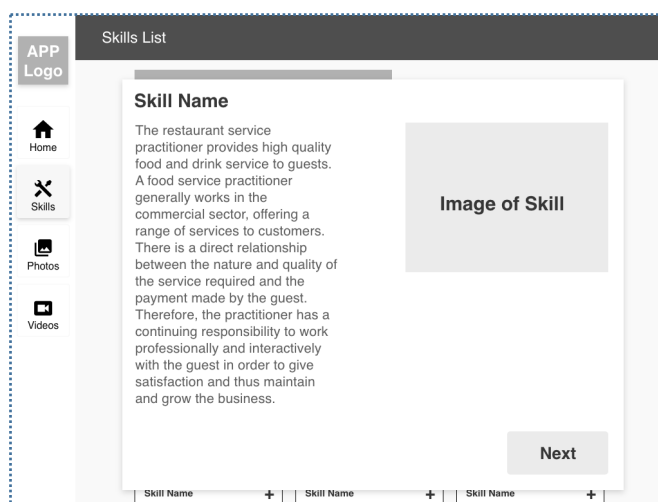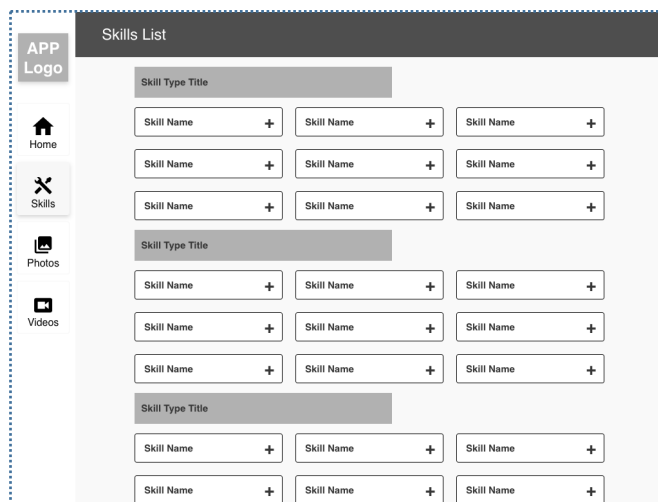
2.2 Functional requirements:

1. The skills information data comes from the network request;
2. Click the specific skill name to show a dialog box;
3. The text of skill description can be selected by long click;
4. Click the "Next" button to show the next skill until the skill is the last one within the skill type, then the "Next" button is hidden.

3 Page Photos

3.1 Elements include:

1. Page title: "Photos";
2. Photos list;
3. Pagination navigator.
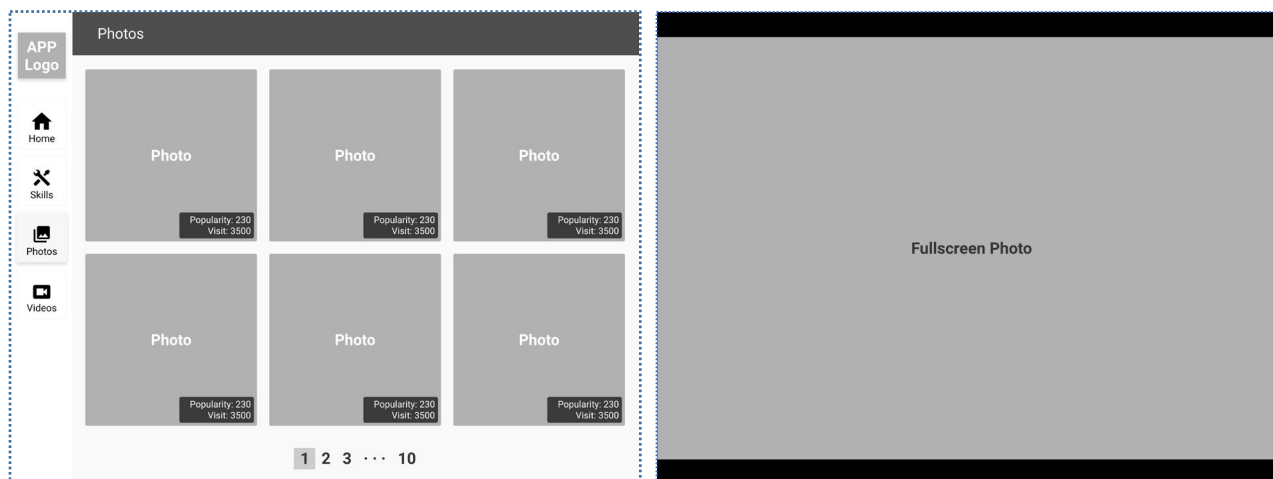
3.2 Functional requirements:

1. The photos data may have multiple pages from the network request;
2. Each photo shows the number of visit and popularity;
3. Popup a context menu with an item names "Share this photo" by long clicking a photo;
4. Share the photo via the system share channel to other application such as SMS by clicking the context menu item named "Share this photo".
5. Click the photo to show it in full screen. User can scale the photo with two fingers' gesture and drag the photo by one finger.
8. Pagination navigator displays the first page number, the last page number, current page number, and the two page numbers next to the current page. The rest of the page numbers should be shown as "...". Refer to the example for further details.
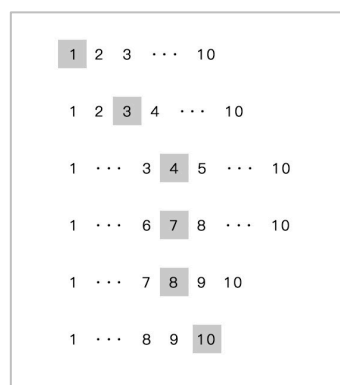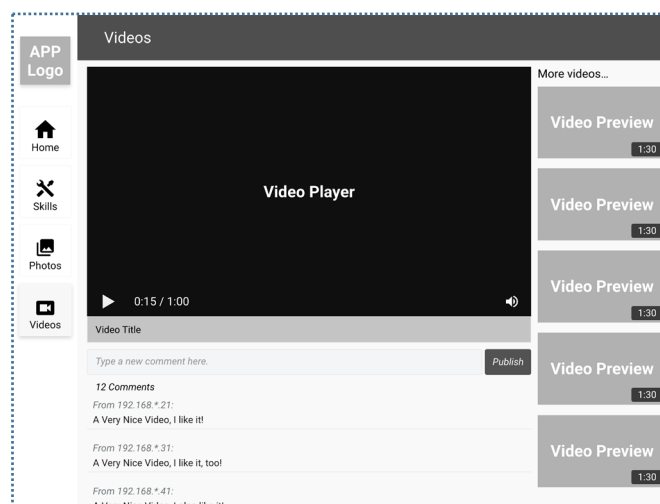

6.
7. *Example*

4 Page Videos

4.1 Elements include:

1. Page title: "Videos";
2. Video player;
3. Video play/pause button;
4. Video title;
5. New comment input box;
6. "Publish" button;
7. Number of comments and comments with IP address and content;
8. "More videos" list.

4.2 Functional requirements:

1. The videos data come from the network request;
2. The video player is playing one of the videos, and the rest are shown in the "More videos" list;
3. The item in the "More videos" list includes a frame of the video as video preview and video's duration;
4. Click the item in the "More videos" list, video player's source would be changed to the clicked item;
5. Click the play/pause button to play or pause the video;
6. Double click the video can play or pause the video;
7. When pressing and holding on the video, video plays at 2x speed; when release, video playing speed resume to 1x;
8. The video timer in video player shows the elapsed time and the total time;
9. Click the mute/unmute button to mute or unmute the sound;
10. Input the comment and click the publish button to publish the comment to server;
11. After publish a new comment, the newly published comment should be added to the comments list.

Instructions to the Competitor

1. Please create the project with correct package name (Android)/ Organization Identifier (iOS). Naming convention: edu.ws2022.aXX.pm.
2. You should save the project in the folder: XX_Module_A_PM.
3. You should rename the generated apk (Android)/ app (iOS) file as XX_Module_A_PM.apk (Android)/ XX_Module_A_PM.app (iOS), and save it in the root of the XX_Module_A_PM folder.
4. The whole XX_Module_A_PM folder should be pushed to the provided remote Git repository.
5. Submit part AM in the morning and part PM 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 is your workstation code.

Marking Scheme

Module A PM		
No.	Sub-criterion	Mark
1	Page Home	2.3
2	Page Skills-list and Page Skill	2.3
3	Page Photos	2.7
4	Page Videos	4.4
5	General Demands	2.3
6	Judgement	1
	Total	15