

Android Project Documentation

Team Member List

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Device Name

Unown

Project Title

My Quiz App

Instructions

1. Load the quiz automatically, or by opening the list of icons (indicated by the white circle in the low-center part of the screen) and touching the "My Quiz App" icon.
2. Select a new quiz by selecting the "New Quizzes" tab and choosing a particular quiz.
3. Complete the quiz by selecting a radio button and then hitting the "next" button for each question.
4. View quiz results by clicking the "Quiz Results" tab, then clicking on a quiz to see a toast of your results.

Lessons Learned

We discovered that developing mobile applications comes with a different set of strengths and restrictions than developing desktop applications. These differences are inherent in mobile hardware, mobile software, and the mobile marketplace landscape.

Mobile hardware is restricted in screen size, but has a greater variety of inputs than desktops. A mobile application must be a set of views bundled together to perform a task because the small screen can't hold everything. Each view must be visually appealing on its own while also flowing naturally into the next view. For example, a mobile application cannot have a single screen with a scroll bar because scrolling with fingers is too slow and laborious. Instead, elements must be spread across single screens that are in a logical order. Desktop applications are designed around a cohesive view while mobile applications are designed around navigation. The greater variety of inputs (accelerometers, etc.) on a mobile device means that developers have more creativity to design apps. However, these new forms of interaction can backfire if not used correctly. For example, mobile devices can be rotated while desktops can't. Switching to a horizontal view on mobile could make the UI more accessible or mess up the orientation of all the elements. Mobile applications must be designed around different ways of interacting with a device.

The modular nature of mobile software due to the Android OS can be a strength and weakness. Mobile applications can switch between each other to perform tasks, so applications can be designed to leverage existing resources. By contrast, desktop applications exist in relative isolation from each other. Desktop applications usually don't need to consider how to directly

pass data and resources to each other. Thus, mobile applications can work together more effectively than desktop application, but they must be designed in a particular way in order to do so. These mobile design requirements make certain activities that require the presence of “free floating files” difficult in mobile devices. (e.g. writing, compiling, and testing code).

The mobile application landscape is another cause of the unique strengths and restrictions inherent in mobile development. Mobile applications have the potential to reach a huge audience because there are more mobile users than desktop users⁴. But these devices have an incredible amount of variety in hardware and operating systems (even within the Android OS). Mobile designers need to choose a version of Android that targets their audience. But, will future updates break the application on some devices? Will a critical component of the application alienate some users who can't update their OS? Mobile hardware, mobile software, and the mobile landscape are distinct from those of desktops, and failing to acknowledge this will lead to bad mobile applications.

Sources

1. Icon created by Vlad Marin, free for commercial use:
<https://www.iconfinder.com/quizanswers>
https://www.iconfinder.com/icons/190308/games_grey_quiz_icon#size=128
2. Android Blog
<http://android-developers.blogspot.com/2011/06/things-that-cannot-change.html>
3. <http://www.smartinsights.com/mobile-marketing/mobile-marketing-analytics/mobile-marketing-statistics/>
4. Questions for Trivia Quiz
<https://hobbylark.com/party-games/FreeFun100QuestionQuiz>