

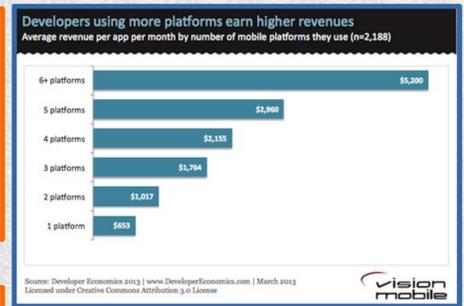
Design of networking game in the iPhone iOS platform

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ABSTRACT

In our days everyone has the possibility to use a mobile device more than a desktop computer because of its portability. In this way every user can have direct and easy access to any information. The last five years we have witnessed a new revolution in information technology: The revolution of the mobile applications, especially on smart phones and tablet devices. It is estimated that soon people will use their mobile devices twice the time they work on desktop, because internet browsing optimized for mobile devices. Today, there are many different mobile platforms such as Android, iOS and Windows Mobile. Here, we present our design for the iOS platform, **using as a test case a quiz application**. Starting from the idea, we move to a hard copy design, coding, networking, design verification and testing.



INTRODUCTION

Nowadays companies are facing a lack of mobile development talents. Market demands developers for apps to run on iOS, Android and whatever operating system will come next. For young developers with programming skills, that is a promising opportunity on a career makeover.

The way we communicate, do business, and access news and entertainment changed with the latest mobile devices and their applications. Everyone has the ability to access their mobile device easier than their Desktop computer. Mobile application developers become one of the most demanding and fastest growing IT careers.

Applications for mobile platforms have evolved to a point that offers the user a rich and fast experience. Applications are technically categorized based on the programming environment in which they are executed, such as iOS, Android, or Symbian OS. They are also divided according to their functions for mobile platforms as follows: communication applications such as email, production applications such as calculators, multimedia applications such as audio and video streaming, and game applications.

Figure 1 demonstrates that the developers employing just in one platform are probably solo, amateur developers or have not yet had an expansion onto more platforms. In order to earn more revenue, developers should expand their applications onto new platforms.

Can a beginner develop his own application? → YES

It all starts with an idea

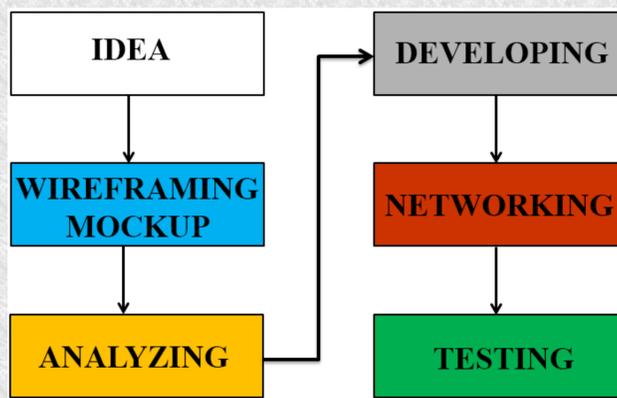
All it takes for someone to begin is an idea.

Wireframing the idea (Sketching)

The designer needs to create on a paper a sketch of how he imagines the interface.

Analyzing the modes of execution

Before we begin to develop an application, it is important to clarify how it operates.



Developing

Coding single use of application.

Networking

Based on networking technologies and on single use.

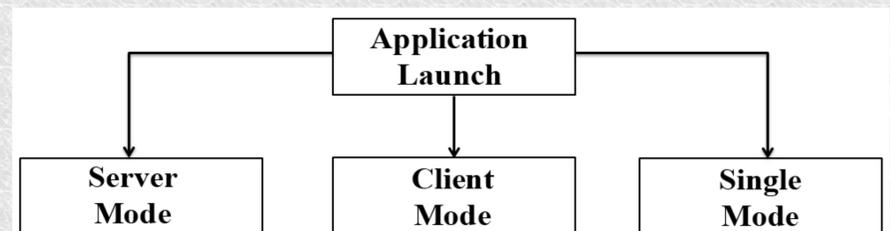
Testing

Simulating the project and fixing problems.

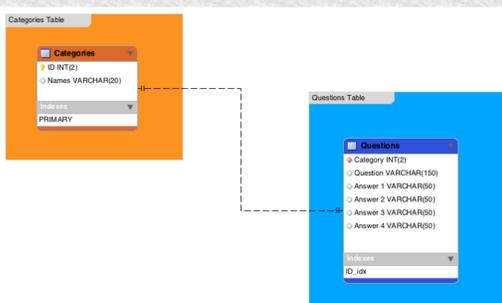
To start with, the designer needs to create on a paper a sketch of how he imagines the interface. This process is very important because it helps him to arrive at the desired result with less effort. Also by drawing on paper, it is easier for the designer to show his ideas to others so that he receives comments and reviews about them.



Figure 2 shows the digital design (mockup) of the multiplayer game view controller.



The flow diagram of user actions when starting the application. There are three options of execution. The first is about hosting an online-web game (server), and the second about a client in a network game. Finally, we have the function of single player.

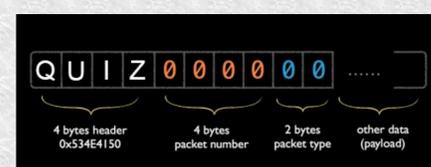
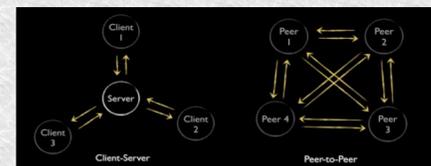


Simplified database that consists of two tables. The first table is for the categories and its names. The second is for the questions and its answers.



In single player mode, user chooses a category and presses start button. An alert message shows up that asks the user to set the time and the number of questions. Then, the game starts and the first question with its possible answers in random order show up. The user chooses an answer and if it is correct points are gained. If the choice is wrong no points are gained and follows the next question.

Multiplayer Mode



Multiplayer mode is based on Client-Server model. Data packets were used for messaging between devices. Finally, four state machines were created.

CONCLUSION AND FUTURE WORK

Programming for the iOS operating system is not only an interesting experience, but also a promising source of income, especially for young developers. It may be a rough and climbly road, but in the end rewards are awaiting for the systematic, careful and endured developer.

The main future goal is to provide the application to the public via the App Store. It is also important to enrich the database with more questions, so that the user always discovers something new. Then, out of the users' reviews we will be able to achieve better results with an update of the application, such as more user-friendly environment.

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