Basic first aid manual implemented on the Android platform for mobile phones through animations created with Poser software

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Abstract. *The intention of this investigation was to develop an application for the different users who possess a mobile phone with technology Android announcing basic information about the first aids by means of animations elaborated with the software Poser Pro. One determined that the application is available in the Play Store in order that the users could unload and install of free form it is to say without any cost. The production of the animations was a very hard work that it needed of a lot of time to show the final result that fulfills the requirements of the user. It was achieved to use some free tools for the development of the application.*

Keywords

Android, Agile Methodology, 3D Animation, Poser Pro, Mobile Device.

1. Introduction

It is very important that people have a basic knowledge of first aid, as it is the first immediate assistance without discrimination that is provided to one or more persons who have suffered an accident or sudden illness until medical help arrives qualified.(Cruz Roja Ecuatoriana, 2013)

The Android operating system to be based on Linux does not own, meaning and encourages the development of software, and not to pay any license to create applications for this platform.(Catacta Llive & Guaita Ayala, 2011).

There are countless applications on first aid, the novelty of this work is to display animation using 3D human models, thus avoiding exhaustive texts provide resuscitation and other emergency maneuvers (Aragón, 2014). Also of note is that the application is free and functioning Internet connection is not required.

The purpose of the research was to present information on first aid by animations on mobile devices with Android technology, in order to allow the user to visualize what to do if there is an emergency.

2. Materials and methods

2.1 Diseño

To begin with the creation of the application had to configure the development environment. Eclipse IDE, Java JDK, SDK and ADT plugin for Android, these tools can be found on the official Android Developers: To perform this configuration tools such as were necessary: http://developer.android.com/sdk/index.html

Regarding the development of the animation program called Poser Pro 2012 was used according to (SmithMicro Software, 2013) states that: Poser contains a library of varied content thus saving time and resources development. Therefore it was not necessary to perform the modeling of the characters (human models), or objects, as this program allows you to import files from other programs such as 3D Studio Max that were the most used and there are many sites on the Internet 3D objects.

The proposal that was given was to present basic information about what to do if there is an accident. It was determined that this application the following contents: assessment of injury, the injured person information (contacts), cardio pulmonary resuscitation, fractures, burns and emergency kit.

For the final assembly of the animations was necessary to use video editing programs such as Sony Vegas and Adobe Premiere. Similarly to run on all Android devices called video converter program was used: Free Video Converter, it can be obtained from: http://www.koyotesoft.com/

2.2 Metodología

The methodology chosen for the project is ASD (Adaptive Software Development), which is a technique for

developing agile software short and medium term, the aim is to maintain constant communication with the customer to correct errors in an existing quickly avoiding mishaps at project completion.

It is an open methodology, does not have many ties or rules to follow concerning the documentation there is no techniques or tools to address these points.

Phase speculate. Mission and tentative project planning their date and relevant activity was established. We defined the following cycles:

Cycle 1 (Plan of cycles), Cycle 2 (Analysis), Cycle 3 (Design), Cycle 4 (Implementation), Cycle 5 (Testing and documentation)

Phase collaborate. All features raised at the stage of speculation, in order to structure the project according to the established requirements for a mobile application of quality are realized.

Phase learn. The application is subject to a series of tests on various mobile devices with different screen sizes and versions of the Android operating system to meet the requirements posed by allowing errors in time because as the project progresses the amount of code increases.

3. Results

The application of first aid was assessed on various mobile devices with the Android operating system, as there are devices with small, medium and large screens; just as work in most versions having Android.

No.	Device	Version	Size
1	Sony Ericsson Xperia Play R800i	2.3.4	4.0 inch 480x854 pixels
2	Samsung Galaxy Tab 3	4.1	7.0 inch 600x1024 pixels
3	LG Optimus L3 E400	2.3.6	3.2 inch 240x320 pixels
4	Samsung Galaxy Ace S5830	2.3	3.5 inch 320x480 pixels
5	Samsung T989 Galaxy S2	2.3	4.52 inch 480x800 pixels

Table 1: Mobile devices with Android

As shown in Figure 1, the user through your device accesses the application of first aid, the videos are stored in the / res / raw. For the contacts it makes through SQLite, which is a management system databases using SQL.
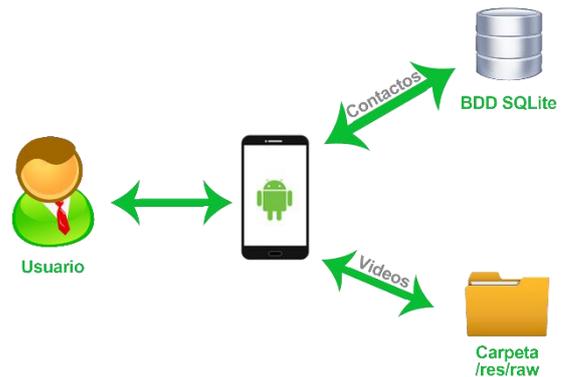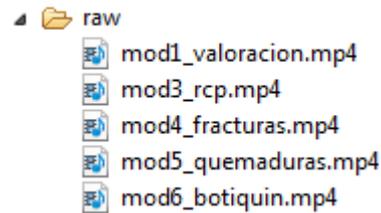

Figure 1: Architectural Diagram

Figure 2: Folder /res/ raw

Rendering the animations are made in. PNG, this means that for every frame an image is created, in order to obtain a better quality viewing on mobile devices.

Figure 3: Scene CPR animation

The application can directly download and install the Google Play for free at the following link: https://play.google.com/store/apps/details?id=ec.danielmedina.primerosauxiliosec

Figure 4: First aid mobile app

4. Conclusions

Mobile devices are easily portable due to their small size, these devices you can install all applications that meet user needs either free or paid.

Was achieved by creating the application of First Aid for phones and tablets with Android technology, showing

videos and virtual 3D animations by using the Poser Pro 2012 software.

He managed to acquire new knowledge about using Poser software used to create animations built into the device showing the user a nice display with very good quality.

The development of the animations, is a hard job that requires a lot of time to get to show the end result that meets customer requirements.

The use of the ASD methodology for creating quality software in the short and medium term, because it is always in contact with the client and the team to correct existing errors quickly and to continue the development without problems at the time of completion.

Programming applications for devices that have the Android mobile operating system by the author has been a new and interesting experience, because new knowledge in professional life will be acquired. It is a great advantage to make applications with free software because people who wish to make a project based with this technology can have all the tools for free.

5. Gratitudes

To my parents, who gave their full support to get an honest education.

My undergraduate thesis director, who gave me all the time with their knowledge and good advice.

The Technical University of North Engineering Faculty of Applied Science, for giving me the opportunity to learn skills for future life.

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