

**DEVELOPING A FILIPINO-ORIENTED ANDROID EDUCATIONAL GAME APPLICATION
USING PYTHON**



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ABSTRACT

A project that will help enriching the minds of Filipino youth on Philippine histories and making them to appreciate the essence of freedom and patriotism. This will also help to improve their intellectual abilities and mental skills. Through this project, Filipino children will gain more knowledge about the past stories of Philippine's greatest icons and events which they can pass and share on to the next generation. It is a good application for everyone not just because mobile phones nowadays can be carried everywhere but also it can help in preserving, enriching, and promoting Philippine history and cultural awareness. The proponents developed this project to determine the difference of learning between the traditional way of teaching and reading historical books and the application, to make learning experience more appealing, interesting, enjoyable, and fun and to convince everyone especially teachers and parents to recommend the application to their students or children ages from 8 to 14 years of age.

Keywords: Android, Android Application, Filipino Storybook Application, Philippine National Heroes, Ren'Py, RAPT, Filipino Language, Smartphone, Python, Philippine historical events and festivals, Filipino people who gave honour to the country.

CHAPTER 1

INTRODUCTION

1 Background of the study

The Philippine history especially those topics on heroes, significant people, and historical events are only taught in school from primary, secondary, and tertiary level. Students who are taking Philippine history subject only know these topics during their examination and sadly, they memorize these topics in order to pass their Philippine history, and some find it a nuisance and useless to what course they are taking. After all, as time passes by, new things came, new knowledge will be learned and they tend to forget the Philippine history.

Nowadays, technology is one of the greatest influences in one's life. Technology in the form of gadgets, most especially those which has game applications with eye-catching graphics and user-friendly interfaces, easily grabs attentions and gives entertainment to the people. The Logo Quiz and 4 Pics 1 Word which can easily downloaded in Iphones and Android phones are some of game applications example. These games give wonderful and beautifully-made images and challenging levels which the player will guess the name of the logo or the name of the picture shown. Children and adults really love these kinds of games, and because of the fast developments and improvements of technology, they can easily acquire these games. Android is one of the most popular and powerful mobile operating system and device used by many people.

So, the proponents came up with an idea of creating an Android game application that will incorporate Philippine history particularly the Philippine heroes, People who had given honor to the Philippines, and Philippine significant events and festivals. The category "people

o had give honor to the Philippines” are those people who excelled and shown their talents
l skills in the field they have chosen, like arts, sports, music, pageant, and the likes, that can be
preciated by many Filipino around the word and made them proud to be “Pinoy”. The
entioned components of the game will be narrate and shown using the Filipino language,
pecifically the “Tagalog” dialect. There will be short quizzes about the stories that were
eviously read to measure if the user understands what the reading material is all about. There
ll be ten chosen topics each category and with it are pictures which can help the user to
ually know what the topic talks about. An example is Dr. Jose Rizal, so there will be images
Rizal’s birth place, where he was shot-dead by the Spaniards, picture of her former lovers, and
on. Also, each category, there will be a button specifically for another quiz, and this time
ound it will be a long quiz that covers all the ten chosen topics. The long quiz will measure the
er’s intellectual capabilities both in comprehension and memorization. Also, there will be
other long quiz or we can call it an exam which can be found in the category section and we
me it as “Pagsubok”. The “Pagsubok” will cover all the given categories from Philippine
eroes, Philippine historical events and festivals, and Famous people who give honor to the
ountry. The “Pagsubok” will measure the intellectual ability of the user on how he differentiates
nd remembers all the given informations in each category either in images or words.

To make the game more interesting, the proponents decided to put a narrator, so that the
ser will just listen and read along. Also, sound effects and background music will be used to
ld more interesting things and feel in the application.

This can be a good application for everyone not just because mobile phones nowadays
an be carried everywhere but also it can help in preserving, enriching, and promoting Philippine
istory and cultural awareness.

.2 Technology Application Context

A lot of mobile applications already exist in the market today and most of them are made for entertainment, educational purposes, and sometimes the combination of the two. These applications are made with the combination of wonderful graphics, clear text, and effects that are interesting in the eyes and ears of the consumers but as we search throughout mobile applications, there is little percent of Philippine-base application especially in game category. And so, the proponents' interactive reading and quiz application will introduce Filipino history such as Philippine Heroes, Famous people who give honor to the country, and Philippine historical events and festivals.

The application was made using Python, Ren'Py, and RAPT, and using these new tools were new to the user's experience and learning it was one of its major requirement for the completion of the project. The application, like the other mobile applications, is composed of different images, text, sounds, and audio files, these combinations will make the project more appealing, interesting, enjoyable, and fun. The images and informations for the life or the bibliography of the Philippine heroes and famous people who give honor to the country, and the history and story behind the Philippine historical events and festival were gathered using the internet and other available resources like old books that can be found in school libraries, journals, thesis writings, and old notebooks in Philippine history subject. In order to have clear and picturesque images, the proponents used Adobe Photoshop and MS Paint to enhance pictures found in the Internet and scanned from the books. The proponents also consider the clarity of the recorded voice used in the project, so tools like Audacity or any tools that can remove noise plus good quality microphone will be used for better experience.

3 Objectives of the study

The general objective of this research is to develop an educational Android game application that introduces Philippine history using the Filipino language and enlighten the mind of every individual of how great the culture and history of the Philippines.

The specific objectives are:

- To introduce some Philippine history, famous people who give honor to the country, and Philippine historical events and festivals.
- To make learning experience more appealing, interesting, enjoyable, and fun.
- To continue the quiz if the user accidentally closed the application
- To determine the difference of learning between the traditional way of teaching and reading historical books and the proposed application.
- To convince everyone especially teachers and parents to recommend the application to their students or children ages from 8 to 14.

4 Significance of the study

Modernization really changes the life of everyone most especially the existence of technology which keeps on changing. We cannot deny the fact that because of these our traditions are forgotten most likely by young ones when technological products were introduced to them like different gadgets, computer games, play stations, and some other devices that can cater their pleasures and entertainment.

The result of this study can be a great help to bring back and preserve Philippine histories and to be proud of it. This can be an instrument for effective learning due to its creative way on teaching that will give entertainment because the game is visually captivating, easy to use, and it can measure the child's learning, reading, and listening skills.

Since we are already in a modern way of living surrounded with modern technological devices, this can be a great opportunity to incorporate the idea of reintroducing the Philippine stories by having a game application that is related to the histories of the Philippines. This would be fun because it will have a colourful approach in attaining knowledge and awareness and uplift everyone to love and instill patriotism in each one of us.

5 Scope and Limitations of the study

The study will generally focus on developing an Android game application that introduces Philippine historical people and events such as Philippine national heroes, Filipinos who gave honor to the country, and Philippine historical events and festivities, these can be served as categories of the game.

The following are the project scopes:

- There are four (4) categories specifically: “Mga Pambansang Bayani ng Pilipinas”, “Mga Pilipinong nagbigay karangalan sa bansa”, “Mga makasaysayang pangyayari sa Pilipinas”, and “Pagsusulit”.
- Every category, there should be ten (10) topics. The topics are chosen according to its popularity and the relativity for the category.
- Every end of the story, there should be a quiz contained of 3 to 4 questions with a maximum of four choices.

- In every category, there should be a topic named “Pagsubok” or quiz contained of ten (10) random questions came from the ten (10) topics of a category.
- In the “Pagsusulit” category there should be a thirty (30) random questions came from “Mga Pambansang Bayani ng Pilipinas”, “Mga Pilipinong nagbigay karangalan sa bansa” and “Mga makasaysayang pangyayari sa Pilipinas”.
- Every after answering all the questions in every stories, “Pagsubok”, and “Pagsusulit”, a total score of correct answers over total items being asked should be shown.
- The dialect used like the narration and story lines should be in Filipino
- A read-along or narration should be provided in every chosen story
- It is deployed and used in an Android devices version 2.1 and up
- RAPT (Ren’Py Android Packaging Tool) should be used to convert the project into Android game application
- Users will be from age 8 to 14

the following are the project limitations:

- As we test the application by running it to different Android devices, we discovered that there is an exception with Mini Samsung Galaxy and Samsung Galaxy Y
- In the reading of the story, the user can’t return to where he/ she stopped if he/ she quit the game

Glossary/ Definition of Terms

- **Android SDK** - a software development kit that enables developers to create applications for the Android platform. The Android SDK includes sample projects with source code, development tools, an emulator, and required libraries to build Android applications.
- **Application** – it is a software application that runs on smartphones, tablet computers and mobile devices.
- **Festivity**- it is a celebration, feast, or a party
- **Filipino language** – Filipino is a prestige register of the Tagalog language, and name under which Tagalog is designated the national language of the Philippines
- **Hero**- somebody who commits an act of remarkable bravery or who has shown an admirable quality such as great courage or strength of character
- **Honor**- something like award, gesture, or gift, that signifies high achievement or respect
- **Python** – is a general-purpose, interpreted high-level programming language whose design philosophy is readability. Its syntax is said to be clear and expressive.
- **RAPT** – Ren'Py Android Packaging Tool is used to integrate Ren'Py projects to Android devices
- **Ren'Py** – is a visual novel engine that helps you use words, images, and sounds to tell stories with the computer. These can be both visual novels and life simulation games.
- **Smartphone** – is a mobile phone that offers more advanced computing ability and connectivity than a contemporary basic phone.