

Chapter 1

INTRODUCTION

1.1 Statement of Problem

Major Problem

- “How to develop “HULA-WHO? (Inventions and Discoveries from Past to Present)” an Android Game Application that features the Inventions and Discoveries from the Past to Present?”

- To educate the people about Inventions and Discoveries in a more fun and entertaining way by playing this Android Game.

Specific Problems

- “How to develop an Android Game Application that integrates graphics and sounds?”

- To make learning process easy and it helps for relaxation of the player in playing the game. Also to keep the player in the mode of the game that will persuade the player’s emotional responses.

- “How to develop an Android Game Application that has Mini-game?”

- To make the game more fun and interesting. The coins gained in Mini-game will be used to buy hints making it accessible for the player.

- “How to develop an Android Game Application that can save and load player profile?”

- At some point, most players do not devote their time on playing the game. Thus, the proponents develop an Android Game Application that can save and load player profile so that by the time the player wants to retrieve and play again, he/she does not need to start from the beginning.

- “How to develop an Android Game Application using LUA as the Programming Language, Corona SDK as the Software Development Kit, SQLite as the Database Management System, Photoshop CS6 as the graphic editor and Audacity as the audio editor.”

- Primarily, LUA is the programming language known by the proponents, and it is easier to use for developing the game. Second, SQLite will serve as the storage of data's. Lastly, Photoshop CS6 and Audacity to add effect on the game and also it enhance the imaginary and creativity of the proponents.

1.2 Current State of the Technology

We are faced with a gaming generation of children who spends their time and money on online games. Educational games enhanced learning through visualization, experimentation and creativity of play. Often it includes problems that develop critical thinking.

The ideas of HULA - WHO? (Inventions and Discoveries from Past to Present) varies from different concept of different games that the proponents had researched or played as well as the following:

Logo Quiz is a quiz game where you have to guess the logos of different brands. There are tons of logos that surround us every day: how many of the logos do you know? Throughout the game you'll be presented with a bunch of different level packs, each containing logos of various brands or companies. Don't worry if you're stuck on the logo – you can always get some clue by using hints. [UNKN2012]

Celebrity Quiz is a trivia game where it tests your recognition of the rich and famous throughout the past few decades – from 1950s' all the way through to 2013. It's the "Guess Who" of the celebrity world. If the player comes stuck, there are hints available to help his/her way. As you gain more correct answers you unlock more levels and gain extra hints to help you crack the right answer. [UNKN2013]

Who Wants to Be a Millionaire is a quiz game wherein the player must prove their selves by correctly answering all the taxing questions. If you need help, you can use the famous official lifelines: Phone-A-Friend, 50:50, and Ask the Audience. [UNKN2013]

True or False is a trivia quiz game deciding whether the statements are true or false. But think fast, it's against the clock! Astounding facts on a whole range of topics. Try out your general knowledge and test your wits! But watch out, tricky false statements are mixed in with true facts. [UNKN2013]

1.3 Objectives

1.3.1 General Objective

- To develop “HULA-WHO? (Inventors and Discoverers from Past to Present)” an Android Game Application that features the Inventions and Discoveries from the Past to Present.

1.3.2 Specific Objectives

- To develop an Android Game Application that integrates graphics and sounds.
- To develop an Android Game Application that has Mini-game.
- To develop an Android Game Application that can save and load player profile.
- To develop an Android Game Application using LUA as the Programming Language, Corona SDK as the Software Development Kit, SQLite as the Database Management System, Photoshop CS6 as the graphic editor and Audacity as the audio editor.

1.3.3 Scope and Limitation

Scope

- HULA-WHO (Inventions and Discoveries from Past to Present) is an Android Game Application. The target age of players for this game is 16-22 years old. The player can navigate the game by tapping the screen.
- The Main Menu has four (4) game buttons namely: New Game, Load Game, Leaderboards, and Options. *New Game Button* is designed for first time players. It enables the player to create new player profile. There are only three (3) slots provided for players' profile. If all slots are taken, the player will need to delete an existing player's profile in order to continue. After creating the player profile, the game's storyboard will appear discussing the brief story of the game. The player may read or skip the story. *Load Game Button* will allow the player select saved game he/she wants to load (if there is any available saved game). As the selected player's profile is tapped, it will go to Player Menu and load the latest level reached by the player. *Leaderboards Button* permits the player to view the all-time top ten (10) achievers of the game. *Options Button* will allow the player to optimize sound and music. Also it enable the player to learn instructions on how to play the game.
- The Player Menu has four (4) game buttons: the Play, Slot Machine, Achievements and Back to Main Menu. *Play Button* will allow the player to start the game. *Slot Machine Button* enables the player to play the Slot Machine which is design to gain extra game coins. Coins will serve as the in-game currency to buy hints during play time. Game coins have a maximum limit of 999,999. Any coins gained after reaching the maximum limit will be discarded. The player has six (6) chances of spinning the slot machine. After using all the six chances, the slot machine will be disabled and the player must wait thirty (30) minutes to spin again. In order to win game coins, the player must have three (3) the same images aligned horizontally at the middle. *Back to Main Menu Button* allows the player

to return to the Main Menu of the game. *Achievements Button* will permit the player to view the tasks needed to accomplish in order for him to be included as the top 10 achievers in the leaderboards.

- There are thirteen (13) tasks for Achievements namely: Stack of Coins, Pile of Coins, Bag of Coins, Chest of Coins, Hint User, Hint Buyer, Hint Customer, hint Shopper, Ancient Master, Middle Age Commoner, Early Modern Ranger, Modern Age Genius and Game Master.
- *Stack of Coins*, the player must collect 2,000 game coins to get 50 achievement points.
- *Pile of Coins*, the player must collect 3,000 game coins to get 100 achievement points.
- *Bag of Coins*, the player must collect 5,000 game coins to get 200 achievement points.
- *Chest of Coins*, the player must collect 10,000 game coins to get 500 achievement points.
- *Hint User*, the player must use hints 20 times to get 50 achievement points.
- *Hint Buyer*, the player must use hints 30 times to get 100 achievement points.
- *Hint Customer*, the player must use hints 40 times to get 200 achievement points.
- *Hint Shopper*, the player must use hints 50 times to get 400 achievement points.
- *Ancient Master*, the player must finish Ancient Period to get 100 achievement points.
- *Middle Age Commoner*, the player must finish Middle Period to get 200 achievement points.
- *Early Modern Ranger*, the player must finish Early Modern Age to get 300 achievement points.
- *Modern Age Genius*, the player must finish Modern Age to get 400 achievement points.
- *Game Master*, the player must accomplish the entire game to get 500 achievement points.

- The game has four (4) Historical Time Periods that serves as the stages of the game.
 - Ancient Period (from c. 3500 BC to c. 500 AD). [UNKN2013].
 - Middle Age (form c. 500 AD to year 1499). [UNKN2013].
 - Early Modern Age (from year 1500 to 1899). [UNKN2013].
 - Modern Age (from year 1900 up too present) [UNKN2013].
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- Each historical time period has different numbers of levels needed to accomplish. Ten (10) levels for Ancient Period, ten (10) levels for Middle Ages, fifteen (15) levels for Early Modern Ages and fifteen (15) levels for Modern Ages. There are different game mechanics in each level. In order to proceed to the succeeding level, the player must answer the required number of correct answer. The complexity of the game rises as the level also increases.
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- The player is given starting game coins of 1,000. Game coins will serve as in-game currency and is used to purchase hints that ranges from 250-500. If the player has zero (0) game coin, he may still continue playing the game but cannot purchase any hints. Whenever the player runs out of coins he may play the Slot Machine on the Player Menu to gain game coins.
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- In the first Historical Time Period of the game, the Ancient Period, one (1) image is displayed featuring the inventions/discoveries during the said period. The player needs to select the inventor/discoverer of the image from the choices being provided before the time limit expires. After the player tapped his chosen answer, an animation will appear indicating whether the answer is right or wrong. Whether the answer is correct or not, the player will proceed to next picture to be guessed. Every level has a different time allotted as its limit in answering the question. Failure to answer after the time limit expires will automatically be counted as wrong answer. The player must meet the number of required correct answers in order to complete and proceed to the next level. Also, in every level, the player is given a maximum number of wrong answers allowed to commit

(Refer to Appendix A). Reaching the maximum number of wrong answers will end the level. Every time the player completes a level, the player will receive game coins.

- Game coins earned after completing each level per Historical Time Period ranges from 30 as the minimum and 450 as the maximum game coins. As the level increases and the quantity of game coins to be earned also increases.
- The game has three (3) hints namely: Show Description, Reveal the Name and 50/50. *Show Description* will give the player description about the image being displayed and this hint is cost-free. *Reveal the Name* will display the name of the invention/discovery being presented by the image and will cost 250 game coins. Lastly, *50/50* will remove 2 incorrect choices leaving 2 choices (the correct and wrong answer) and will charge 500 game coins. Hints can only be used once in every trivia and the player must have enough game coins to purchase it.
- When the player accomplished one period, he may proceed to the next Historical Time Period, from Ancient Period to Middle Ages, then to Early Modern Age, and lastly to Modern Age. The concept is still the same throughout the entire game. The only difference is that the questions being asked, depends on the historical time period the player is currently playing.

Limitations

- The game can only be installed to Android Platform devices with a minimum version of Android 2.2.
- The game does not support for multi-network game play.
- The game can only process one command at a time.
- The game only supports portrait view.