Chapter 1: The Problem and Its Settings

1. Background of the Study

Nowadays, Android devices are really a part of our everyday life. We use an Android device to send messages, check our social media accounts, set an alarm, take down notes, capture images, watch videos, listen to music, and almost everything that we do, we do it with an Android device. Android devices are also used for business-related aspects, to monitor the productivity of work, to manage different remote sites at once, and so much more. These Android devices really have so much capabilities and features, it is not only used for personal or business related matters it can also be used as a gaming platform.

Some of the pioneer games on Android like Angry Birds, Temple Run, and Candy Crush, are some examples of a single player game, it is quite fun, addictive, simple and very easy to play, and is available to be played without internet connectivity, but a certain aspect is still absent, multiplayer capability, that is. But now that the multiplayer features on Android devices have been introduced and is being enhanced, gaming on Android devices became a trend especially to those who wants to have fun, enjoy and at the same time, socialize. Games like Clash of Clans offer the fun and enjoyment of a game and at the same time interaction with real people, but it is not available to be played without internet connectivity.

The group believes that a game is more fun, if it has multiplayer capabilities and at the same time, it could be played without internet connectivity. A game that can be played offline if playing solo, or through a local area connection for player versus player games, or through Internet if playing with other players around the globe.

The group aims to develop an Android-based game that would be able to support multiplayer function. A game that would provide fun and enjoyment to the users and at the same time, provide a challenging aspect to the game. (revision needed)

The group aims to develop an Android-based game that would have a multiplayer capability. A game that would provide a fun and exciting experience to the users and also promote social interaction with other users who also play the game.

1. Objectives of the Study

The general objective of the study is to develop an Android-based game for fun and enjoyment. Specifically it aims to:

1. Design a game with the following characteristics:
   1. An application that can be installed on an Android devices.
   2. Develop an application that can scan and decode QR codes and Barcodes for monster generation.
   3. Develop an application that can emulate monster breeding, monster training, and monster battles.
   4. Develop an application that would be able to support single player mode if the user wants to play offline and multiplayer capability if the user were to play with other users.
2. Create the application using (tools):
   1. Unity 3D

Unity3D is a powerful cross-platform 3D engine and a user friendly development environment. Easy enough for the beginner and powerful enough for the expert; Unity is used to easily create 3D games and applications for mobile, desktop, the web, and consoles.

* 1. Monodevelop by Unity

Monodevelop is a development IDE for writing code in C# and JavaScript.

* 1. Blender

Blender is a professional free and open-source 3D computer graphics software product used for creating animated films, visual effects, art, 3D printed models, interactive 3D applications and video games.

* 1. Adobe Photoshop

Adobe Photoshop is a raster graphics editor developed and published by AdobeSystems for Windows and OS X,

* 1. Genymotion

Genymotion is a third-party Android emulator.

1. Test and Improve the application in terms of:
   1. Functionality
   2. Reliability
   3. Usability
   4. Efficiency
   5. Portability
   6. Maintainability
   7. Crowd Satisfaction
2. Determine the level of acceptability of the application using ISO 9126.
3. Scope and Limitation

Scope:

* + Monster Raising – choose a monster and take care of it, feed it and train it, and battle other monsters to become the strongest monster ever.
  + Monster Life Span – even the best among the rest grows old, do not forget to retire your monster whenever he feels old.
  + Monster Training – train your monsters raise to its attributes. You can either make your monster Work to earn money and raise Attributes at the same time, or Special Training which costs a certain amount and raise the attributes greatly. And also, don’t forget to make your monsters rest to reduce their tiredness.
  + Monster Breeding – you can freeze a monster anytime to prevent it from aging, and Breed it to other frozen monster to create an offspring that may acquire some of the previous attributes of its parents.
  + Monster Tournaments – battle other monsters in a tournament, to earn prize money or prize item. Participating in an unofficial tournament will grant prize money and/or prize item to the champion, while participating in an official tournament will advance the monster to the next rank and will grant with prize money to the champion. This feature is only available through Internet connectivity.
  + Monster Duel – challenge your friends and their monster to duel or you can also conduct an unofficial tournament of up to 4 people and prove that you the best trainer amongst them. This feature is available through wireless local area connectivity.
  + Monster Virtualization – acquire monsters by scanning barcode or QR code, each code contains a monster.

Limitations:

* Multiplayer mode is not available if the device does not have wireless network support.
* Multiplayer mode is not available if there is no available network nearby.
* The Monster Virtualization feature cannot be used if the device does not have a rear camera.
* Some of the mini games cannot be played if the device does not support tilt.
* The game is developed only for touch screen devices.
* The game can be only implemented on Android devices.

1. Significance of the Study

The purpose of this development is to create an Android-based game that provides fun and enjoyment and boost their strategic thinking skills and at the same time promote social interaction to the users who plays the game.