Pyramid Plunder

By The Pyramid Plunders

Team Members

Name	Job	Job Description
Justin H	Lead Developer	Does The majority of the game programing and documentation
Mohit B	Assistant Developer	Makes Graphics and presentation assistance
Amir A	Document Manager	Makes the presentation, game documentation, and programing assistance
Jeevan M	Graphics Designer	Makes graphics, animations, presentations, and musical masterpieces

Description:

Plunder the Pyramid. Vanquish foes. Unravel Mysteries. Pyramid Plunder is a retro inspired 8-bit side-scrolling role-playing game, from the creators of The Last Promise, in which gameplay spans across a myriad of genres, encompassing puzzle, action, and adventure. In the game, the player will assume the role of a tomb raider who ransacks the pyramids of Giza in quest of discovering opulent treasures and slaying legendary monsters. Each tomb is randomly generated, ensuring a challenge for the most skilled players, and giving the game endless replay value. Puzzles will consist of spatial reasoning, exact timing, and demanding riddles to challenge the player in a various ways. These force the player to juxtapose spontaneous decision making and critical thinking to be successful in his or her pursuit for glory. The player will advance his or her character by collecting gems obtained by defeating enemies and completing quests to accumulate experience. This experience will allow the player to purchase powerful items in order to empower themselves. The challenge is to survive.

Pyramid Plunder is a side-scrolling action/adventure game which encompasses elements of platformers and puzzle games. The player plays as a tomb raider who explores the ancient pyramids of Egypt in search of gold and glory. Each pyramid will be randomly generated to ensure that no two explorations are the same.The player must fight past a variety of monsters inspired by ancient Egyptian myths including mummies and the sphinx to find treasure. These monsters become more menacing when paired with clever A.I. (artificial intelligence) systems which give different monsters various behaviors.

The player can either fight past them or use cunning technique to sneak through the tomb unnoticed. Puzzles and riddle challenges will periodically provide changes of pace which will require thought and patience to solve. On the way to the treasure room the player can collect gems which will allow new weapons and gear to be purchased at the shop. Killing enemies and plundering pyramids will give the player experience points, which make the character level up and become more powerful which increases health, damage inflicted, and unlock new abilities. The character can be saved after each play session to allow for character development and progression between play sessions.

The menu system is a crucial portion of Pyramid Plunder. Not only is it used for the overall cohesion and organization for the game, but it also adds to the features for the player. As the game opens with originally crafted music, the first screen for the credits will be shown followed by a title screen. The title screen has various menu options: playing difficulty, adjusting the volume and controls, viewing instructions, creating username and passwords with a log system, viewing high scores, resuming saved games, and exiting the game. As the game is opened there will be a menu option available. In this menu screen, the player is allowed to upgrade the avatar, buy and sell items, save the game, exit to the main menu screen and exit the application.

Each pyramid will contain a variety of randomly placed traps, enemies, and puzzles to challenge the player time and time again. When starting a new exploration the player will select the difficulty of the pyramid to explore. Harder pyramids will be larger and will contain harder traps and enemies, some of which might require special equipment to pass. The player will be able to use both melee and ranged weapons and will also have a pickaxe and shovel to remove obstructions from the tomb. These tools allow the player to approach each situation in a variety of ways. Some enemies will chase the player down after he is sighted while other will hold their ground and defend a location. These features combine to create a variety of possible situations and play styles which allow for limitless adventures.

Throughout Pyramid Plunder, the avatar 'levels up' by completing the specific tasks in each pyramid. These tasks range from demolishing enemies to discovering loot. Each task completed earns the player *gems* and *experience*. The gems can be used to empower the player, and the experience is used for 'leveling up'. Since the health of the avatar is limited, the player can 'die' which would bring him to the point of starting that specific tomb over again. Leveling up occurs by being promoted to another pyramid, which has more difficulty compared to the last.

Pyramid Plunder is based on the player whose goal is to complete tasks. Points are awarded through defeating enemies and gaining experience. Through each pyramid the player has the opportunity to collect gems which can either be saved to add to the total score, or spent on new weapons and items. The player will lose a fixed amount of gems if the character dies while exploring a tomb.

Pyramid Plunder is an Role Playing Game in which the the player explores randomly generated

pyramids. These tombs will be constructed with random layouts and then populated with enemies, traps, and loot. Platforming elements allow for quick paced enemy encounters in which the player has the option to fight or avoid combat by staying on a different level than do the enemies. The player will be rewarded for killing enemies with gems and loot. As the player moves through the pyramid the screen will scroll to keep the character in the center of the screen. The ability to level up and save between play sessions will create continuity for the player and will allow for greater character progression.

The Pyramid Plunder is an action-adventure game which truly tests the skills of the player through the traps and puzzles of the pyramid tombs. Each avatar needs to fight enemies and gain experience.

Communications Management: The communication between different group members will be essential to the overall success of the project and team. The members of the group will be able to consult with each other in person whenever deemed necessary. Some meetings will be organized for bringing the entire group up to date with the current status of Pyramid Plunderer. The Lead Developer will be responsible for coordinating team meetings and keeping all of the group members informed on the project status. Also, a meetings will be held in the month before the presentation to better organize the project and prepare individual group members for contributing to the presentation of Pyramid Plunderer. Collaboration between different group members will be further facilitated through the use of communications technologies including Google Drive, Hangouts, Skype, and Dropbox.

Schedule Management: The schedule of Pyramid Plunderer is based primarily on deadlines decided by the group. Some contingency days are included in the plan to accommodate unforeseen circumstances. The group will also communicate schedule changes through email as deemed necessary. Some of the major deadlines on the schedule are as follows:

Project Schedule Summary

10/8-	Storyboard of Major Events Complete
10/27-	Software Requirements Specifications
11/2-	Manager class with 'stub' worker classes complete
11/9-	Manager class with comments and JavaDocs complete
11/16-	¼ of project software completed with comments and JavaDocs
11/16-	Outline User Manual complete
11/30-	½ project software, comments, Testing Chart, JavaDocs completed
12/7-	Updated Data Flow, Physical Flow, UML diagrams Storyboard
12/14-	¾ project software, comments, JavaDocs, Testing Chart completed
12/21-	Presentation run through with team

1/10-	All of project software completed with comments and JavaDocs
1/11-	All Presentation material complete
1/11-	Readme.txt complete
1/25-	Disk created for competition
2/01-	Last Upload
3/22-	Presentation with actual judges

Requirements Management: The Lead Developer will be responsible for managing the project requirements and ensuring that the game development strictly follows the original project plan and design. The project must be a 2-D turn based strategy game with an 8-bit art style. The project must be capable of running on modern day Windows, Mac, or Linux based computers.The games must be able to run on a computer with a 1GHz CPU, 1 GB of RAM, and several hundred MB of hard disk storage. The project will be coded in Oracle Java 6.

The Gameplay screen will consist of randomly generated scrolling worlds built of tiled sprites or textures, atop which sprites for a player-controlled avatar, and both moveable and immovable environmental objects should be placed. The gameplay will be side scrolling and the user will move their character using the arrow keys to harking back to classic 1980s sidescrollers. The game must have an original soundtrack evocative of the 8-bit gaming period. During gameplay, players should be able to access a menu screen with a settings icon. The contents of this menu should be contextual to the game your team creates, but at minimum the menu should allow the player to save the game (for loading and continuation of play later), exit to the title screen, and exit the application.

Software Engineering Timeline

Design Phase Start Date	Date Deadline	Task	Person Responsible	Finished	Verified
09/23	**9/27**	**General Description** – Overview of game, abilities, constraints	Justin	Yes	
09/30	**10/3**	**Project Plan (including its Function)**	Amir	Yes	
10/01	**11/19**	**System Design** Lifecycle determined	Jeevan	Yes	
10/01	**11/19**	**Meeting** with "Expert"	Amir		
10/01	**11/19**	**Review Requirements** and ask questions	Jeevan	Yes	
10/01	**11/19**	**Game meets specifications** (8-bit title, 1980s style)	Amir	Yes	
10/04	**10/11**	**Story Board of Game Options**	Mohit	Yes	
10/07	**10/29**	**Data Flow Diagram**	Mohit	Yes	
10/07	**11/19**	**UML Class Diagram**	Justin	Yes	
10/12	**1/01**	**PowerPoint Draft**	Amir		
10/13	**1/01**	**User Manual Draft**	Amir		
10/14	**01/01**	**Class Header Comments**	Amir		
10/14	**01/01**	**Methods Chart**	Justin		
10/14	**01/01**	**I/O Interfaces** – examples of input or output, screen shots	Amir		
10/14	**01/01**	**Database design**	Justin		
10/14	**10/14**	**Front-end tables, fields designed**	Justin		
10/14	**01/01**	**Back-end tables, fields designed**	Justin		
10/14	**10/19**	**Software and Hardware requirements listed**	Amir		
01/04	**01/04**	**Presentation (with each speaker noted)**	Amir		
01/01	**02/01**	**PowerPoint created**	Amir		
11/02	**02/01**	**User Manual created**	Amir		

Development (Code) Phase Start Date	Date Deadline	Task	Person Responsible	Finished	Verified
10/14	**01/01**	**Create all class and Method numbs (header structures)**	Justin		
10/14	**02/01**	**Create all Class and Method Header Comments**	Mohit		
10/14	**11/20**	**¼ of basic game code complete**	Justin		
10/14	**11/01**	**Player Login** (username/password authentication)	Justin		
10/14	**11/20**	**Game state** retrieved/sent from/to a database for storage	Justin		
11/20	**12/10**	**Client implements a Leader board** (listing players and scores) [where data is retrieved from a database]	Justin		
10/14	**12/20**	**½ of basic game code complete**	Justin		
10/14	**12/20**	**Database** (may be local or remote)	Justin		
10/14	**12/20**	**All player and game states are stored in a database**	Justin		
11/13	**11/23**	**¾ of basic game code complete**	Justin		
11/23	**01/01**	**All of basic game code complete**	Justin		
01/01	01/10	**Code Working** – lock all work on the code	Justin		
02/15	**02/07**	**Readme.txt** doc created	Amir		

Water-Fall Diagram

Requirements: In the requirement's portion of this project, the group will analyze the rubric and derived the different requirements for the game.
Design: The group will move on to designing the game based on the requirements.
Implementation: The group will implement the design for the game and improve/adjust any areas in the game as necessary.
System Testing: The group will thoroughly test the project and go back to the implementation phase of the project if changes are needed.
Operation: The game will be completed fully functional and playable when released.

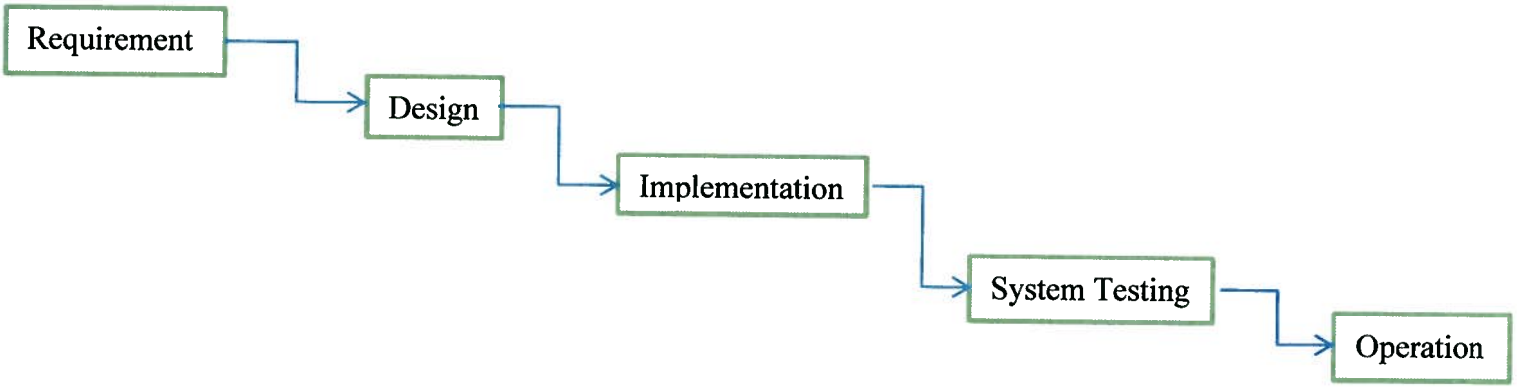
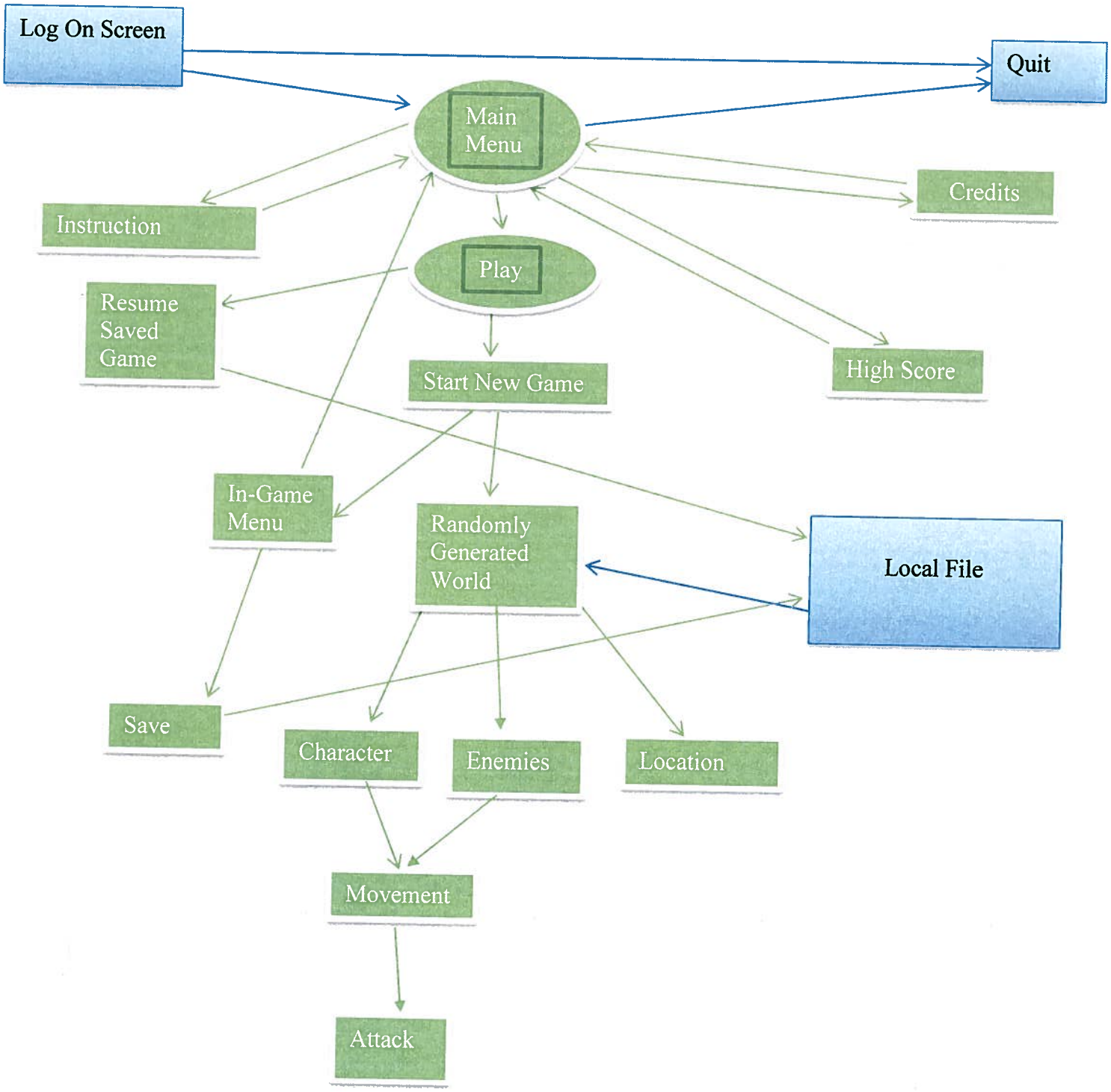
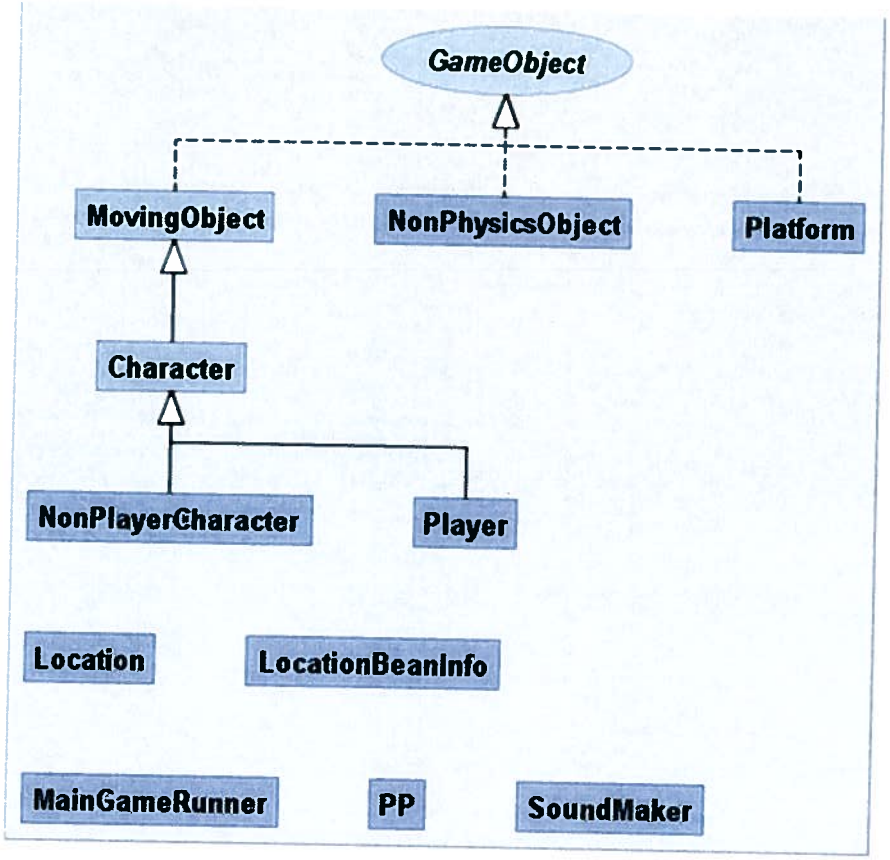


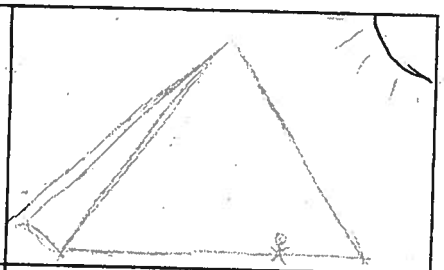
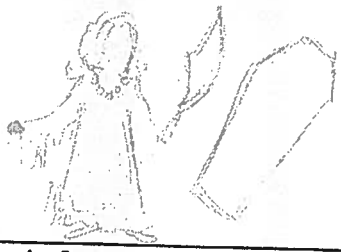
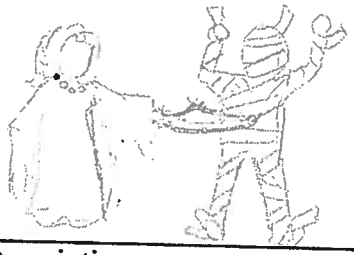
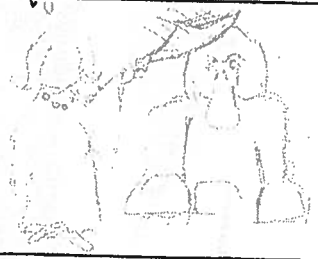
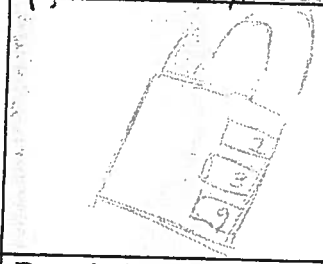
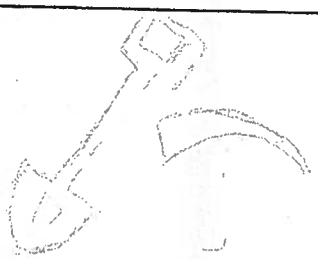
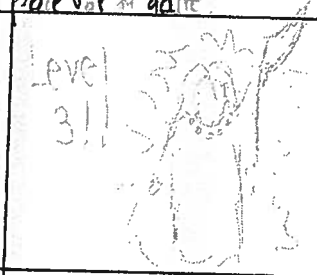
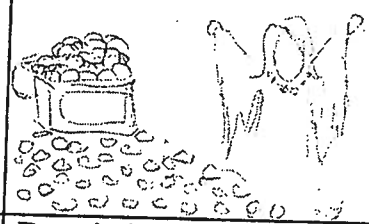
Figure 2

Data Flow Diagrams-The Pyramid Plunder



UML Diagram


GameObject
MovingObject
NonPhysicsObject
Platform
Character
NonPlayerCharacter
Player
Location
LocationBeanInfo
MainGameRunner
PP
SoundMaker

Credits Mohit: ~~~~~ Jeevan: ~~~~~ Amir: ~~~~~ Justin: ~~~~~	New Game Resumed Save Game Settings Exit Game	
Description: The game opens with a credits scene	**Description:** The game first screen is a menu, with multiple options	**Description:** The game opens with a short cutscene set in Egypt near the pyramid of Giza.
Save Game Upgrade Avatar Buy/Sell Items Exit Game		
Description: The in-game menu screen has options to save, and buy/sell items.	**Description:** The games primary character is you, a thief raiding the pyramids for riches.	**Description:** One of the games variety of enemies is the mummy.
		
Description: Another one of the enemies is the sphinx	**Description:** The game also consists of many puzzles that change the path of the game	**Description:** Gems constitute the games currency they can be used to buy and sell items.
		
Description: Some of the games tools are shovels and pickaxes. these can be used to solve more difficult puzzles.	**Description:** Defeating enemies allows you to gain experience, allowing you to level up. which raises your overall stats.	**Description:** The goal of the game is to overcome all the challenges, and reach the final treasure room.