Test Plan 2: PLEX

Lane Pollock
Game 2338

GENERAL INFORMATION

- Summary

    Testing will be done on PLEX, a game that consists of a single player version and multiplayer version. The functions being tested include the story and build modes, engine, new, save, and load game functions, drivers for play, menu, game logic, graphics, music, and time, as well as the connection timeout and database drivers.

- Environment/User Community

    Testing should allow for 5 concurrent testers without visible lag time. This testing can be done over the course of two semesters, most likely at University of Mary Washington.

- Test Objectives

    The objective is to test the major functionality of PLEX's single-layer and multiplayer modes.

- Acceptance Criteria

    The game will reach a good status with the meeting of the many requirements. No level 1 severities, at least.

- References

    PLEX Specification Requirements Document

PLAN

- Test Description

    Game engine must start first, and be the only thing that can write to the main game buffer. It must initialize all other drivers and handle user input. It initializes connection to the database in build mode and writes the bugger to screen.

    New Game sets up all variables and asks user to choose a player. Then it loads all the appropriate puzzles.

    Save Game only works in story mode, writes over file if it already exists or creates a new if not, and saves in a particular format for the game to read later.

    Load Game works and only in story mode.

    Play Driver only works in story mode and allows the player to pause and resume the game.

    Menu Driver loads menus and keeps track of selector.

    Game Logic and Graphics Driver function properly.

    Music Driver loads all music, plays music, is able to stop and pause music, and allows player to adjust volume at any time.

    Timer should start and always be running while game is on.

    Database only works in build mode, connects, returns queries in string format, and returns queries in int/boolean format.

Database Timeout Driver works in build mode, and kicks inactive users.

Movie Driver loads info abut movies, pauses and plays, and stops/ skips.

- Test Team
  There is a max of 5 concurrent testers
- Milestones
  The milestones include a multiplayer version during the fall semester and a single player version in the spring semester.
- Budgets
  The cost and investment is $0
- Testing
  - Requirements
    Users will probably have to download and install software before playing. Users must have an internet connection for multiplayer mode. Game only works with Windows 98/XP/NT or LINUX.
  - Testing Materials/Test Tools
    Use Specification Requirements Doc, and follow Game Development Lifecycle
  - Test Training
    There is no staff training, just play testing with up to 5 people to test the database systems.

SPECIFICATIONS AND EVALUATIONS
- Requirement Specifications
  - Business Rules/Functions
    No Business requirements
  - Software Functions
    Game Engine
    - sets up game and makes appropriate connection to database
    - prompt user for single player or build mode
    New Game
    - only in story mode
    - prompts to choose a new character
    Save Game
    - only in story mode
    - prompts to enter file name
    - all game's variables and info should be written to a save file
    Load Game
    - only in story mode
    - shows appropriate UI
    - after file is chosen, loads correct data

Play Driver
  - only in story mode
  - pauses and plays the game
Menu Driver
  - both modes
  - in charge of all game menu screens
Game Logic Driver
  - all rules of the game, movement, storylines, puzzles, quests, and interface to database works correctly
Graphics Driver
  - loads all of the appropriate graphics on screen
Music Driver
  - music plays, stops, and volume can be adjusted
Time Driver
  - Keeps track of elapsed time
  - can be reset at any time
  - counts off of clock, not screen refresh rate
Database Connection
  - Only in build mode
  - fetches and returns queries
  - queries based off of time driver so PLEX doesn't query with users refresh rate
Connection Timeout Driver
  - if player hasn't made a move in x seconds, timeout to make space for other players
Movie Driver
  - OPTIONAL
  - handles playing movies at the beginning and end of story mode, as well as cutscenes

○ Test/Function Relationships

Test Suite	Function
Game Engine	
	- First thing to start - Must initialize all other drivers - Handle user input - Connect to database - Write Bugger to screen
New Game	
	- Only works in story mode - Sets up game variables and drivers - Must ask user to choose a character - Must load all puzzles in game map
Save Game	
	- Only in story mode - File name must be valid to read back later - If file exists, overwrite it - If file doesn't exist, create one - Save in correct format
Load Game	
	- Only in story mode - File exists - File is in correct format
Play Driver	

Test Suite	Function
	- Story mode - Pause the game - Return to game if paused
Menu Driver	
	- Load appropriate menu when asked - Keep track of where selector is
Game Logic	
	- All game logic, rules, variables, etc functioning.
Graphics Driver	
	- Graphics are loaded before the game plays - Return graphics to the engine buffer
Music Driver	
	- Load all of the game music - Play music - Stop music - Mute music - Adjust volume
Timer	
	- Start when game is started - Restart timer
Database Connection	

Test Suite	Function
	- Only in build mode - Connects to the database - Return query results in string format - Return query results in int/boolean format
Database Timeout	
	- Check to see how much time has passed since user input and timeout if passed x
Movie Driver	
	- Load move information - Play movie - Pause movie - Stop/Skip movie

- ○ Test Progression
  - *Testing will be done on each section in order, to test the systems independently and then together in use.*
- Methods and Constraints
  - ○ Test Methodology
    - *Team will follow the game development lifecycle*
  - ○ Extent
    - *Partial testing in the fall for multiplayer and spring for single player*
  - ○ Constraints
    - *Team will use a Windows 98/XP/NT or LINUX OS, with max 5 concurrent players on multiplayer modes.*