

Initial Requirements

Team 4

1. Menu Requirements

- a. Main Menu
 - i. Start a new game
 - ii. Load a previous game
 - iii. Exit
- b. Pause Menu
 - i. Save current game state
 - ii. Quit game
- c. Inventory/Status Menu
 - i. Check item description/amount
 - ii. View character status
 - iii. View/edit character equipment
 - iv. View current objective
- d. World Menu
 - i. Displays a map of the world + time period
 - ii. Player can select unlocked areas to travel to them
 - iii. Each area is placed correctly on the map and displays the designated time period

2. World Requirements

- a. Gameplay
 - i. Guard prevents player exit from area until they get a specific item
 - ii. Player has to use a variety of exploration, combat, and interacting with NPCs to get item
 - iii. Once player gives item to guard they can travel to other areas
 - iv. Gameplay tests Mathematics through Combat and Trading
 - v. NPC prompts and item prompts give historical context that is necessary to explore, interact with NPCs, and trade items
 - vi. Each area should take approximately 30 minutes to complete
- b. Areas
 - i. Each area is a historical location in the ancient world
 - ii. Each area will have characters within that area and an obstacle to moving to the next area
 - iii. The obstacle is historically relevant to the time and location
 - iv. Each character can be interacted with to obtain information and/or progress towards overcoming that area's obstacle
 - v. After overcoming the obstacle, the player may proceed to the next area
 - vi. Subsequent areas are connected by historical trading/merchant activity (Silk Road, etc.)
- c. Items

- i. Items can be picked up and dropped
 - ii. Items that are picked up and dropped are added to or removed from inventory
 - iii. Items have a context menu that allows for text based description
- 3. Combat Requirements
 - a. Each location will have different, historically based, regional enemies
 - b. Entity (Player and Enemies) Health
 - i. Entities have a total health
 - ii. Successful attacks remove health equal to the attack's calculated damage
 - iii. At 0 health, a player or enemy runs away
 - c. Successfully completed combat removes enemy
 - d. Combat that is unsuccessful can be repeated but does not remove enemy
 - e. During combat, the player and enemies will take turns making attacks
 - f. Enemy attacks
 - i. Have a range of damage values
 - ii. A value in this range is randomly selected
 - iii. The damage value is applied to the player
 - g. Player attacks
 - i. Player must complete a math problem in order for attack to be successful
 - ii. If answer is incorrect, the attack misses
 - iii. If answer is correct, the attack applies an amount of damage to the enemy
- 4. NPC Requirements
 - a. Dialogue
 - i. Interacting with NPCs brings up a dialogue window
 - ii. Dialogue window shows text of what the NPC is saying to the player
 - iii. Dialogue window has options the player can select in order to respond
 - iv. Dialogue window has a continue button so larger segments of text can be spoken by NPCs
 - v. Dialogue window has a back button, to re-read previous parts of long segments of text
 - b. Interaction
 - i. NPCs turn to face the player if facing away
 - ii. Player should be able to interact with the NPC by walking next to them, facing them, and then pressing a button/key
- 5. Educational Requirements
 - a. Educational requirements are in line with subjects and testing outcomes described by <https://www.doe.mass.edu/frameworks/current.html>
 - b. Primary Source Documents dealing with ancient cities and societies with 1:1 map + detail design
 - c. Mathematics at the appropriate skill level are tested through combat
 - d. Historic understanding and reading comprehension are tested through dialogue with NPCs