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A-maze-ing Assignment

Software Engineering

Dr. Mood

**User Stories**

1. Create user identity (character that is walking through the maze)
2. Walk through the maze
3. Open a door
4. Pick up a key
5. Pick up a block destroyer
6. Use a block destroyer to destroy a block

**Tasks**

1. Create user identity
   1. Make a standard human which can then be selected as either male or female
   2. Allow user to customize player by adding options for hair, skin color, eye color, and clothing
   3. Allow user identity to be given a name
   4. Create functions that allow the user to move the user identity in certain directions
   5. Create functions that allow the user to have the user identity pick up an item and store it (possibly in a vector)
2. Walk through the maze
   1. Design a maze that has walls and corridors
      1. Read in from a file the grid layout that contains doors
         1. Some doors will be locked and can only be opened by certain colored keys that match the color of the door
3. Open a door
   1. Create a function that allows a user to open a door
   2. Create a function that allows a user to use a key to open a door
4. Pick up a key
   1. Create a function that allows a user to pick up a key
5. Pick up a block destroyer
   1. Create a function that allows a user to pick up a key
6. Use a block destroyer to destroy a block
   1. Create a function that allows the user to use the block destroyer.

**Estimates**

The estimated time to finish user story 1 (create user identity) is 1 week.

The estimated time to finish user story 2 (allow user to walk through the maze) is 5 days.

The estimated time to finish user story 3 (open a door) is 2 days.

The estimated time to finish user story 4 (pick up a key) is 1 day.

The estimated time to finish user story 5 (pick up a block destroyer) is 1 day.

The estimated time to finish user story 6 (use a block destroyer to destroy a bock) is 1 day.

The total estimated time for project completion is 3 weeks.

**UML diagram**

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**Sequence diagram**

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**State diagram**

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**User Story Diagram**

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