Name: Owen Knight Mark \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/50

## Brief introduction \_\_/3

For our final project, we’ll be creating an escape room type game. In the game, the player will collect clues that can be used to solve puzzles. These clues can be examined in an inventory that can be accessed via a HUD. It will also allow the player to return to the title screen and view/change the settings. The HUD and its contents, excluding the title screen, will be the main feature I’ll be designing for this project.

## Use case diagram with scenario \_\_14

[Use the lecture notes in class.

Ensure you have at least one exception case, and that the <<extend>> matches up with the Exceptions in your scenario, and the Exception step matches your Basic Sequence step.

Also include an <<include>> that is a suitable candidate for dynamic binding]

### Use Case Diagrams

A diagram of a network

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### Scenarios

**Name:** Uses HUD

**Summary:** The player uses the HUD menu.

**Actors:** Player

**Preconditions:** The game is running.

**Basic Sequence:**

**Step 1:** Player clicks on HUD icon on the screen during the game.

**Exceptions:** N/A

**Step 1:** Some error occurs.

**Post Conditions:** Options in HUD menu are displayed and can be used.

**Priority:** 1

**ID:** H01

**Name:** Open Inventory

**Summary:** Player opens their inventory of clues.

**Actors:** Player

**Preconditions:** Inventory option selected in HUD menu.

**Basic Sequence:**

**Step 1:** Player opens the HUD menu.

**Step 2:** Player selects the Inventory option.

**Exceptions:**

**Step 1:** Error occurs.

**Step 2:** Player selects another option or an error occurs.

**Post Conditions:** Player can view their inventory of clues.

**Priority:** 1

**ID:** H11

**Name:** Open Settings

**Summary:** Player opens the settings for the game.

**Actors:** Player

**Preconditions:** Settings option selected in HUD menu.

**Basic Sequence:**

**Step 1:** Player opens the HUD menu.

**Step 2:** Player selects the Settings option.

**Exceptions:**

**Step 1:** Error occurs.

**Step 2:** Player selects another option or an error occurs.

**Post Conditions:** Player can view and change the game’s settings.

**Priority:** 2

**ID:** H12

**Name:** Return to Title Screen

**Summary:** Player returns to the game’s title screen.

**Actors:** Player

**Preconditions:** Return to Title option selected in HUD menu.

**Basic Sequence:**

**Step 1:** Player opens the HUD menu.

**Step 2:** Player selects the Return to Title option.

**Exceptions:**

**Step 1:** Error occurs.

**Step 2:** Player selects another option or an error occurs.

**Post Conditions:** Player is sent back to the game’s title screen.

A diagram of a company

Description automatically generated**Priority:** 2

**ID:** H13

**Name:** Fails

**Summary:** An error occurs in the HUD meny.

**Actors:** Player

**Preconditions:** Player selects the HUD menu or an option in the HUD menu.

**Basic Sequence:**

**Step 1:** Player opens the HUD menu and an error occurs.

**Step 2:** Player selects an option in the HUD menu and an error occurs.

**Exceptions:**

**Step 1:** Error doesn’t occur.

**Step 2:** Error doesn’t occur.

**Post Conditions:** Error message is shown.

A diagram of a company

Description automatically generated**Priority:** 2

**ID:** H14

## Data Flow diagram(s) from Level 0 to process description for your feature \_\_\_\_\_\_\_14

### Data Flow Diagrams

A screenshot of a computer

Description automatically generatedA diagram of a computer

Description automatically generated

A diagram of a software company

Description automatically generated

### Process Descriptions

Access HUD:

**if** Player is playing game

**if** Player clicks on HUD button

Player enters HUD menu

**If** Player clicks on Title button

Player returns to title screen

end **i**f

end **if**

end **if**

Exit HUD:

**if** Player is in HUD menu and clicks the Exit button

Player leaves HUD menu and returns to game

end **if**

Access Inventory:

**if** Player is in Hud menu and clicks on Inventory button

Player sees Inventory

**while** Player sees Inventory

**if** Player examines clue

Player sees more info on clue

end **if**

end **while**

end **if**

Exit Inventory**:**

**If** Player is in Inventory and clicks on Exit button

Player exits Inventory and returns to HUD menu

end **if**

Access Settings:

**If** Player is in HUD menu and clicks on Settings button

Player enters Settings menu

**while** Player is in Settings menu

if Player edits something

Game settings change

end **if**

end **while**

end **if**

Exit Settings:

**if** Player is in Settings menu and clicks on Exit button

Player leaves and returns to HUD menu

end **if**

Fails:

**if** Player clicks on HUD button or options in HUD menu and an error occurs

Error message pops up on screen

end **if**

## Acceptance Tests \_\_\_\_\_\_\_\_9

**Test 1:** Link to Settings Menu Works

Settings = false (player hasn’t pressed the Settings button yet)

Player presses Settings button in HUD menu

Call Access\_Settings() (same flow as process description in Part 3)

**if** player successfully moves to Settings menu

Assert Settings = true

Test succeeds.

End of Test

end **if**

**else if** Player doesn’t move to Settings menu

Fail() is called (same flow as process description in Part 3)

Error message pops up on screen

Test fails (must retry/change something in program)

End of Test

end **if**

**Test 2:** Inventory Overflow

clues = 0

**while** items < 6 (max number of items in inventory)

Assert clues = number of clues in inventory

**if** Assert fails

Test fails (must retry/change something in program)

End of Test

end **if**

**if** Player finds a clue

clues = clues + 1

end **if**

end **while**

Asser**t** Message pops up saying that the player’s inventory is full and that they can’t obtain anymore clues.

Test succeeds.

## Timeline \_\_\_\_\_\_\_\_\_/10

## Work items

|  |  |  |
| --- | --- | --- |
| **Task** | **Duration (PHrs)** | **Predecessor Task(s)** |
| 1. Initial Research/Brainstorming | 2 | N/A |
| 1. HUD Menu Design | 1 | 1 |
| 1. Database Construction for HUD | 2 | 1 |
| 1. Documentation | 4 | 3 |
| 1. Program HUD Menu | 2 | 2,4 |
| 1. Research/Brainstorming for Inventory & Clues | 3 | 5 |
| 1. Inventory Design | 1 | 5 |
| 1. Program Inventory | 2 | 6,7 |
| 1. Clue Design | 1 | 5 |
| 1. Program Clues | 1 | 6, 9 |
| 1. Research/Brainstorming for Settings | 2 | 5 |
| 1. Settings Design | 1 | 5 |
| 1. Program Settings | 2 | 11,12 |
| 1. Link Components | 1 | 8, 10,13 |
| 1. Testing | 6 | 14 |
| 1. Installation | 1 | 4,14 |

### Pert diagram

A diagram of a task

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### Gantt timeline

A red and yellow lines on a white background

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