Name\_\_\_\_\_\_\_\_\_\_Shubham Gupta\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Mark \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/50

[**Instructions**: Remove everything that is not a heading below and fill in with your own diagrams, etc.]

## Brief introduction \_\_/3

We’re going to make an escape room-style game for our final project. The player will gather hints throughout the game that will help them solve problems. I’ll make sure that the game has sounds when it needs them and that they improve the overall experience. There could be numerous instances in the game where the sound is required. Generally speaking, sound is required when the game is operating. There will be background music playing, as a big event occurs in the game, such the player running out of time or losing, or as they level up by interacting with various items and areas, new sound might also be required.

## Use case diagram with scenario \_\_14

### Use Case Diagrams

A diagram of a game

Description automatically generated

### Scenarios

**[You will need a scenario for each use case]**

**Name:** Sound and music integration

**Summary:** Playing the game allows the player to interact with it; as the player performs various activities within the game, various sounds will be produced.

**Actors:** Player

**Preconditions:** The game has been started by the player.

**Basic sequence:**

**Step 1:** The game starts as soon as the player presses the start button.

**Step 2:**  As the player interacts with various elements and items in the game, various sound effects are produced.

**Step 3:** The game is over, and the player either wins or loses.

**Exceptions:**

**Step 1:** While the game was in progress, something went wrong.

**Step 2:** Both the game and sound cease to function.

**Post conditions:** The game is over, and the player either wins or loses.

**Priority:** 2\*

**ID:** C01

\*The priorities are 1 = must have, 2 = essential, 3 = nice to have.

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

[Get the Level 0 from your team. Highlight the path to your feature]

Example:

### Data Flow Diagrams

A diagram of a game

Description automatically generated

A diagram of a computer

Description automatically generated

### Process Descriptions

WHILE

When the player launches the game and selects a level, they may either interact with the control buttons to initiate sound effects immediately or with the obstacles to initiate sound effects after interacting with them.

END WHILE

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

[Describe the inputs and outputs of the tests you will run. Ensure you cover all the boundary cases.]

I’ll be assigning an arbitrary number to each game element that should produce sound when the player interacts with it in order to do acceptance test for the sound. A number will also be assigned to the sound that is intended to be produced. Following the player’s interaction with that particular section of the game, the program ought to determine precisely which section of the game was just engaged with and ensure that the appropriate sound is playing.

The player’s current position in the game, the sound that was played, and the target sound are the inputs. When a player interacts with a certain portion of the game, the output indicates if the appropriate sound was played. The table includes an example of failure, an example of a success, and an example of the sound being played that shouldn’t be in the g

**Example for random number generator feature**

Run feature 1000 times sending output to a file.

The output file will have the following characteristics:

* Maximum number: the number of different sound effects in the game
* Minimum number: the background music which would always be playing.

**Example for sound feature**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Part of Game | Target Sound | Sound Played | Failure | Success |
| Gathering Hints | 1 | 1 | No | Yes |
| Solving Puzzle | 2 | 3 | Yes | No |
| Time Running Out | 3 | 1 | Yes | No |
| Unlocking Door | 4 | 4 | No | Yes |
| Game Over | 5 | 20 | Yes | No |

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

[Figure out the tasks required to complete your feature]

Example:

### Work items

|  |  |  |
| --- | --- | --- |
| Task | Duration (Hours) | Predecessor Task(s) |
| 1. Sound Selection and Integration | 2 | - |
| 2. Assigning Sound to Game Objects | 2 | 1 |
| 3. Programming Player Interaction | 4 | 2 |
| 4. Sound Validation and Testing | 3 | 3 |
| 5. Documentation | 2 | 3, 4 |
| 6. Quality Assurance Testing | 3 | 3, 4 |
| 7. Final Installation | 3 | 6 |

### Pert diagram

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### Gantt timeline

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| 7 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |

Red = work hours