Name: Amanda Board Mark \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/50

## Brief introduction \_\_/3

My feature for the Doki Doki Library Club video game is working with AI during the mini games and building two of the love interests (LI) the main player will be interacting with.

For the AI portion, I will make an AI computer opponent who will compete against the main player in the mini games we offer. For instance, there will be an AI opponent in a pong game we create as well as a platformer, and math calculations game. To win, the player must beat the AI opponent. Two other games we offer is a minesweeper game and a LI memorization game to win for these games, the main player must complete the mini game tasks under a certain time limit.

Additionally, I will be overseeing the development of two Sonic themed characters under a superclass of Sonic characters LI. This includes their dialogue options when interacting with the player, finding unique sound effects to that character, creating graphics and key memory facts from that character. Personal preferences within each character sub class will determine affection point scoring for the main player and the ability to start a date with the main player, initiating one of the mini games from above. The affection points will be tracked within a LI database that is separate from the character class but will also hold their graphics. To use the audio clips, there will be linked functions within the LI database that are called. My key priorities are a functioning AI opponent and creating these two Sonic themed characters to seamlessly interact with the main player. I will have to program functions for calling character-specific sound effects, increasing/decreasing affection points, current affection level status and updating it, their text dialogues and the ‘date’ occurrence to then call the mini game start function based on the choices made from the main player.

## Use case diagram with scenario \_\_14

### Use Case Diagrams: Character Use Case

A diagram of a diagram

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### Use Case Diagrams: AI Mini Game Use Case

A diagram of a system scope

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### Scenarios

**For Character Use Case Diagram:**

**Name:** Play SFX

**Summary:** The sound effects that play for each specific LI.

**Actors:** Player.

**Preconditions:** LI must be interacted with.

**Basic sequence:**

**Step 1:** Dialogue bubble will pop up.

**Step 2:** Triggers the sound effects to be played.

**Step 3:** After sound plays, must end the sound.

**No Exceptions.**

**Post Conditions:** Audio is successfully played during conversations.

**Priority:** 3\*

**ID:** AUD

**Name:** Display Dialogue

**Summary:** Dialogue text bubbles will be shown from the LI with 3 choice responses the player may decide to respond with.

**Actors:** Player.

**Preconditions:** Love Interest must be interacted with.

**Basic sequence:**

**Step 1:** Dialogue bubble will pop up.

**Step 2:** Response options will appear below the LI text bubble.

Process will loop until the main player reaches a date mini game or process will end as discussed in Exceptions.

**Exceptions:**

**Case 1:** All ‘bad’ dialogue responses are chosen, then the LI will not want to interact with the player again**.**

**Post Conditions:** Dialogue is successfully displayed during conversations.

**Priority:** 1\*

**ID:** DIA

**Name:** Update Affection Points

**Summary:** Affection points are earned through good dialogue choices.

**Actors:** Player.

**Preconditions:** Love Interest must be interacted with.

**Basic sequence:**

**Step 1:** Good dialogue response

**Step 2:** Increase affection points

**Step 3:** Bad dialogue response

**Step 4:** Decrease affection points

**Exceptions:**

**Case 1:** All bad dialogue responses are chosen, then the LI will not want to interact with the player again**.**

**Case 2:** All good dialogue responses are chosen, then the LI will initiate a mini game date.

**Post Conditions:** LI is happy and requests a date, or LI is upset and does not want to interact.

**Priority:** 1\*

**ID:** AFF

**Name:** Initiate a Mini Game Date

**Summary:** After enough good dialogue choices, the LI will ask the main player if they want to go on a ‘date’ that initiates a mini game.

**Actors:** Player.

**Preconditions:** Love Interest must be interacted with and good dialogue choices must have been made.

**Basic sequence:**

**Step 1:** Start mini game

**Step 2:** Play mini game

**Step 3:** Win/Lose mini game

**Exceptions:**

**Case 1:** If player does not want to play mini game, they can back out of the conversation.

**Post Conditions:** A date has been successfully finished or went bad.

**Priority:** 1\*

**ID:** DATE

\*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

In the data flow diagrams below, I will be covering both my Control AI and Handle Sonic Character Interaction processes below.

### Data Flow Diagrams: Diagram 0

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### Data Flow Diagrams: Control AI – Continued from Process 6

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### Data Flow Diagrams: Sonic Characters Continued from Process 4

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### Process Descriptions for Character Functions

The process description for Process 4.1, Process 6.3 and all their sub processes are in the images below, both written in pseudo code.

A screenshot of a computer program

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Sonic Pseudocode Above.

A screenshot of a computer program

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AI Opponent Code Above.

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

The player will respond with either “good” “medium” or “bad” types of dialogue options while interacting with their LI, based on the LI’s preferences. Good responses will result in gaining affection points and bad responses will decrease affection points. Through these responses, the goal is to have a effortless conversation, unique to each scenario of good, bad, medium where depending on what choice the player makes, the next conversation will follow and eventually a date mini game. Testing would need to happen if the user input is correctly measured and the conversation progresses as it should. For AI, the testing would be that it functions in the game similar to how a regular person would and fully automated. In other words, it works as it should.

**Testing Character (LI) Dialogue Responses from User Input**

|  |  |  |
| --- | --- | --- |
| Input | Affection Points | Result of Response |
| “Good” Response | Increase LI affection points and send to LI database by a significant amount | Next dialogue option progresses the relationship towards a date and initiates a more positive conversation |
| “Medium” Response | Slightly increase LI affection points | Dialogue responses will remain friendly, no harm to the points. User does not gain significant amount of points towards a date. |
| “Bad” Response | Decrease LI affection points | Dialogue responses will be more negative, displaying a less friendly response. |

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

### Work items

|  |  |  |
| --- | --- | --- |
| Task | Duration (PWks) | Predecessor Task(s) |
| 1. Create Dialogues for each LI and Conversation Timing/Designing | 4 | - |
| 2. Gather Graphics and Sound for each LI | 2 | - |
| 3. Implement Play SFX functionality | 2 | 2 |
| 4. Implement Dialogue Prompts, Display, and Affection Point Updates while interacting with LI. | 3 | 1, 3 |
| 5. Create a way to initiate the mini game date. | 2 | 4 |
| 6. Once mini games can receive user input, build an AI to play against player in mini games like pong. | 3 | - |
| 7. Testing AI | 3 | 6 |
| 8. Character Finalizing | 2 | 4,5 |
| 9. Integrating and Testing | 5 | 7,8 |

### Pert diagram

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