DE LA SALLE UNIVERSITY - MANILA

Mikey's Beach Adventure

Project Proposal

Presented to Mr. Ramon Stephen

In Partial Fulfillment of the

Requirements for the Course Object Oriented Programming Laboratory (LBYCPEI)

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by

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EQ5
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I. Introduction

The project is a visual novel game built on Java that aims to bring awareness to the issue of pollution and its effects on sea life. The game's story focuses on one person called Mikey, and his actions that relate to the main topic. There are three events in total in which Mikey has to choose between two choices that would decide the final ending. The game’s events will always have facts that would educate the player more on how their choice either benefits or pollutes the environment.

II. Methodology

To develop "Mikey's Beach Adventure," we will employ a systematic approach using various pillars of Java development. The major phases and milestones of our project include:

1. Prototype Development:
   - Create a prototype visual novel using basic text-based input/output mechanisms.
   - Utilize if-else loops to establish the foundational structure of the game, allowing for branching narratives based on player choices.
   - Test the prototype to ensure the basic gameplay mechanics are functioning correctly.

2. User Interface and Graphic Design:
   - Design and implement the user interface elements, including the text box, choice box, and character portraits.
   - Create visually appealing and cohesive graphics for the game, including backgrounds and character artwork.
   - Integrate sound effects and background music to enhance the immersive experience of the game.

3. Main Menu Development:
   - Design and develop the main menu screen, displaying the game's title and options for playing or quitting the game.
   - Implement functionality to toggle the volume of the game's music, allowing players to control the audio experience.

4. Storyline and Narrative Development:
   - Develop the storyline and narrative structure of the game, including the three scenarios and their corresponding choices and consequences.
   - Write engaging dialogues and descriptive text to captivate players and immerse them in the story.

- Iterate and refine the narrative elements based on playtesting and feedback.

5. Gameplay Testing and Refinement:
   - Conduct extensive playtesting to identify bugs, inconsistencies, and areas for improvement in gameplay and user experience.
   - Gather feedback from playtesters to understand their interactions, preferences, and suggestions for enhancing the game.
   - Iterate the gameplay mechanics, user interface, and narrative elements based on the feedback received.

6. Integration of Educational Content:
   - Research and gather relevant educational information about plastic pollution and its impact on marine life.
   - Integrate educational facts and messages seamlessly into the narrative, ensuring they align with the gameplay and story progression.
   - Strive for a balance between entertainment and educational content to engage players while delivering the desired environmental message.

7. Quality Assurance and Finalization:
   - Perform thorough testing and quality assurance checks to ensure the game functions smoothly across different platforms and devices.
   - Refine the graphics, sound, and user interface elements to create a polished and visually appealing experience.
   - Compile and finalize all game assets, including graphics, audio files, and code, into a complete and deployable package.

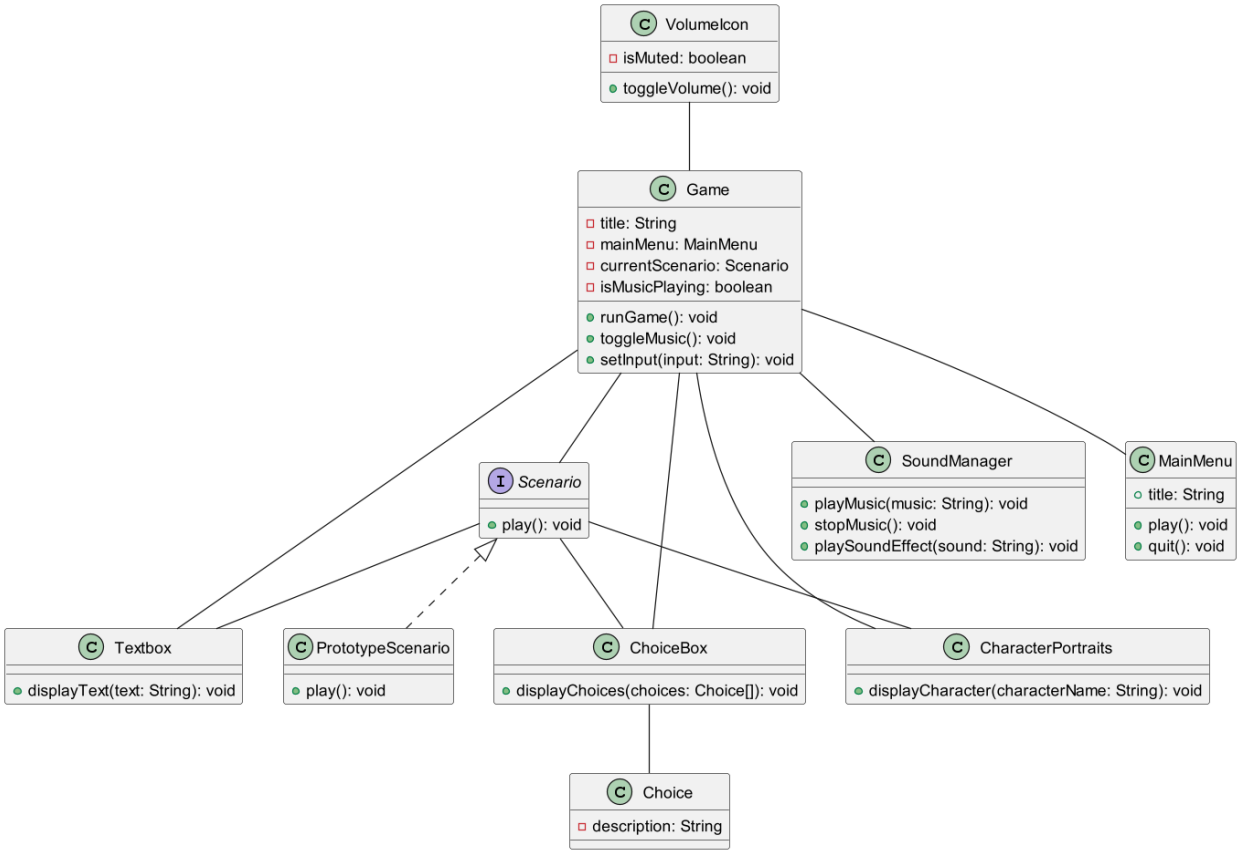
By following this methodology, we will be able to systematically develop "Mikey's Beach Adventure," ensuring a well-structured and engaging visual novel game that effectively conveys the desired environmental message while providing an enjoyable gameplay experience.

III. Project Description

A. UML Diagram

The `Game` class serves as the central component, responsible for managing the game's state and flow. It has attributes such as `title`, `mainMenu`, `currentScenario`, and `isMusicPlaying`. The `Game` class contains methods like `runGame()`, `toggleMusic()`, and `setInput()` to control the game's execution. The `Scenario` interface defines the behavior of different scenarios in the game, with `PrototypeScenario` as an example implementation. The `Textbox`, `ChoiceBox`, and `CharacterPortraits` classes handle displaying relevant text,

choices, and character images, respectively. The `SoundManager` class manages music and sound effects. The `MainMenu` class represents the main menu screen, featuring options like `play()` and `quit()`. The `VolumeIcon` class handles toggling the game's music. The associations between these classes depict their relationships and dependencies. Overall, this simplified UML diagram overviews the key components and their interactions in the visual novel game.



The code for puml:
@startuml

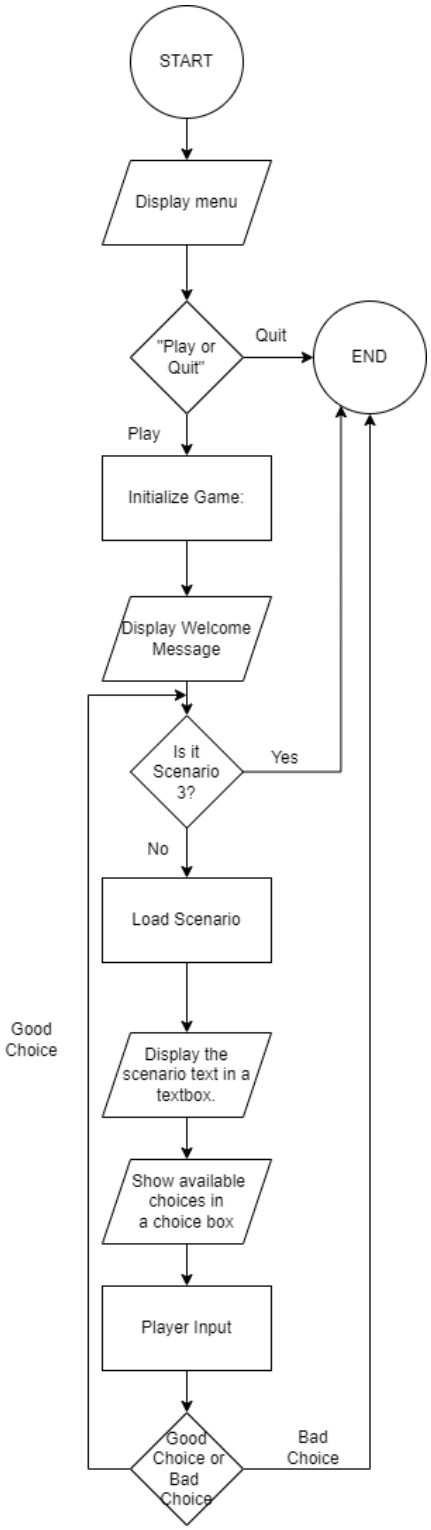
class Game {
  - title: String
  - mainMenu: MainMenu
  - currentScenario: Scenario
  - isMusicPlaying: boolean
  + runGame(): void
  + toggleMusic(): void

```
  + setInput(input: String): void
}

interface Scenario {
  + play(): void
}

class PrototypeScenario {
  + play(): void
}

class Choice {
  - description: String
}

class Textbox {
  + displayText(text: String): void
}

class ChoiceBox {
  + displayChoices(choices: Choice[]): void
}

class CharacterPortraits {
  + displayCharacter(characterName: String): void
}

class SoundManager {
  + playMusic(music: String): void
  + stopMusic(): void
  + playSoundEffect(sound: String): void
}

class MainMenu {
  + title: String
  + play(): void
  + quit(): void
}

class VolumeIcon {
```

```
  - isMuted: boolean
  + toggleVolume(): void
}

Game -- MainMenu
Game -- Textbox
Game -- ChoiceBox
Game -- CharacterPortraits
Game -- SoundManager

Game -- Scenario
Scenario <|.. PrototypeScenario

Scenario -- Textbox
Scenario -- ChoiceBox
Scenario -- CharacterPortraits

ChoiceBox -- Choice

VolumeIcon -- Game

@enduml
```

B. Flowchart

This would be the overall flow of the game



The flow of the visual novel game starts with the main menu, where players are presented with the options to play or quit the game. If the play option is selected, the game initializes and displays a welcome message. It then loads the first scenario of the game.

In the scenario loop, the game plays out each scenario by displaying the corresponding text in a textbox and presenting choices to the player in a choice box. The game waits for the player to make a choice and evaluates it. If the choice is good, the game moves to the next scenario. However, if the choice is bad, a game over message is shown, and the game ends.

The scenario loop continues until the final scenario is reached or until the game ends due to a bad choice. If the final scenario is reached, a win message is displayed, indicating that the player has successfully completed the game. Ultimately, the game comes to an end, regardless of whether the player wins or loses.

C. IPO

A. Input

- Buttons for Main Menu
    - Start Button
    - Info Button
        - Back Button
    - Exit Button
- Button in Scene
    - Next Button
- Buttons in Event
    - Choice Buttons
        - Correct Choice Button
        - Wrong Choice Button
            - Try Again? - Yes Button
            - Try Again? - No Button
- Button on Last Scene
    - Next Button

B. Process

- All buttons redirect the user to another scene within the code

C. Output

- Both 'Start' and 'Try Again? - Yes' buttons bring the user to the 1st scene of the story

- Both 'Exit' and 'Try Again? - No' buttons ends the current run of the program
- The 'Next' button of the last scene and the 'Back' button both brings the user to the main menu
- 'Correct Choices' buttons proceed to the next scene, while 'Wrong Choice' buttons proceed to the Game Over scene
- The 'Next' button in all scenes except for the last scene proceeds to the next scene and part of the story

IV. Deliverables

Presented below is our Gantt chart for our project:

Gantt Chart			
	July 29-30	July 1-14	July 15-21
Project Proposal			
Introduction	Garcia		
Methodology	Garcia		
Project Description	Genito		
Deliverables	Garcia		
Evaluation	Lin		
Conclusion	Lin		
Project Prototype and Documentation			
Coding		Everyone	
Testing		Everyone	
Documentation		Everyone	
User Manual			Genito
Evaluation Process			Everyone
Project Presentation and Demo Video			
Presentation Video			Genito
Demo Video			Lin
Editing			Garcia

As part of our project, we plan to provide a comprehensive User Manual that serves as a guide for players of "Mikey's Beach Adventure." The User Manual will be made available on our project's GitHub repository, ensuring easy access for all players.

The User Manual will be in PDF and will be presented on GitHub. It will include the following sections:

1. Introduction: An overview of the game, its objectives, and the main character, Mikey.

2. System Requirements: Information on the minimum system requirements needed to run the game smoothly on various platforms.

3. Installation Guide: Step-by-step instructions on how to download, install, and set up the game on different operating systems.

4. Gameplay Instructions: Clear explanations of the controls, user interface elements, and how to make choices within the game.

5. Scenarios and Choices: Descriptions of each scenario in the game, along with the available choices and their consequences.

6. Winning and Losing Conditions: An explanation of the conditions for winning or losing the game and how to restart or try again.

7. Educational Information: Relevant facts and educational content about plastic pollution, marine life, and the importance of responsible choices.

8. Appendix: Additional information, such as credits, acknowledgments, and resources used in the development of the game.

V. Evaluation

To assess the performance and effectiveness of "Mikey's Beach Adventure," we will utilize the following criteria:

1. Player Engagement: Measure the level of player engagement throughout the game by analyzing playtime, interaction with choices, and overall immersion in the story.
2. Educational Impact: Evaluate the effectiveness of the game's educational content by gathering feedback from players to assess their understanding of the environmental issues addressed and their willingness to make positive changes.
3. Decision Consequences: Analyze the impact of player choices on the game's outcome and storyline, ensuring that the consequences of both good and bad choices are communicated and understood.

4. User Interface and Gameplay: Assess the user interface for its intuitiveness, ease of navigation, and visual appeal. Evaluate the gameplay mechanics for their responsiveness, coherence, and overall enjoyment.

5. Message Delivery: Measure the game's effectiveness in conveying its main message of promoting awareness about choices that affect marine life. Gather feedback on whether players felt motivated to change their behavior after playing the game.

VI. Conclusion

"Mikey's Beach Adventure" is a significant project that addresses the critical need for environmental consciousness, specifically related to Goal 6 (Clean Water and Sanitation) and Goal 14 (Life Below Water). By combining the engaging storytelling elements of a visual novel game with educational information, our project aims to create a meaningful and interactive experience for players.

Through the three scenarios presented in the game, players are encouraged to consider the impact of their choices on sea life. The two possible endings serve as a reminder that even small decisions can have significant environmental consequences. By delivering factual information and showcasing each choice's positive and negative outcomes, we strive to inspire players to make informed and responsible decisions in their daily lives.

The evaluation criteria outlined above will allow us to assess the game's performance, educational impact, and message delivery. By continuously gathering feedback, refining the gameplay mechanics, and ensuring a seamless user interface, we aim to create an immersive and impactful gaming experience.

In conclusion, "Mikey's Beach Adventure" not only entertains players but also catalyzes environmental awareness and action. By providing an engaging platform for players to experience the consequences of their choices, we hope to inspire positive behavioral changes and contribute to the achievement of Goal 6 and Goal 14. Through this project, we aim to empower individuals to become advocates for clean water, sustainable ecosystems, and the well-being of marine life.

VII. References

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