Untitled Platformer

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Vision Statement

My intention for making this application is to create a openworld platformer with very simple controls. The main goal of this application is actually to familiarize myself with jumping physics and other basic video game concepts in order to be used in future gaming, and also to make a simple, complete game. I will be using the box2d physics environment to do this.

In this project I would like to include menu navigation, persistent storage for game data and save states, fluid player motion with simple controls and non-player interactable physics objects, in addition to a variety of other minor gameplay elements.

As far as stretch goals go, a soundtrack and custom audio files for the player and surrounding environment would be nice. On top of that dynamic lighting and parallax scrolling.

Requirements

|  |  |
| --- | --- |
| **Actor** | **Goal** |
| player | control player through simple gestures |
|  | navigate the open world through interacting with physical objects |
|  |  |
|  |  |
| application | have various physic object based hazards |
|  | have navigation outside of screen bounds |
|  | save progress |
|  | menu options (sound options, controls, etc.) |
|  | various sprite animations |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

**Product Backlog**

This will be updated throughout the semester as new PBIs are added, larger items are broken into smaller ones, and completed items removed.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Story ID** | **Story** | **Story Points**  **(in est. hours)** | **Priority** | **Status** |
| 4 | create basic animations | 2 | delayed | 0 |
| 6 | add paused game state | 3 | 4 | 0 |
| 7 | fine tune collision mechanics | 4 | 3 | 0 |
| 8 | random obstacle generation | 6 | 1 | 0 |
| 9 | game over state | 5 | 2 | 0 |

Sprint #1

Sprint Backlog

|  |  |  |  |
| --- | --- | --- | --- |
| **Story ID** | **Story / Task** | **Estimated**  **Hours** | **Actual**  **Hours** |
| 1 | create game activity/buffer | 2 | 2 |
| 2 | create player class | 1 | 1 |
| 2 | implement player in framework | 1 | 1 |
| 3 | create object class | 1 | 1 |
| 3 | recognize player interaction | 2 | - |
| 4 | create player movement animation | 3 | - |
| 4 | menu/background animations? | 3 | - |

Review

Stories 1 and 2 were the only ones fully completed. Story 3 turned out to be more complex, and ended up sucking up any time I had planned to use for story 4 so that went undone aswell.

The framework is there, but there isn't much to look at at this point, but here is a screenshot:



Retrospective

This sprint did not go very well. I did not set aside enough time to complete my tasks and ended up in a crunch but still didn't manage to implement what I had planned. I intended to use box2d for physics, but I later realised that I was generally confused about the framework and didn't understand it well enough to properly implement it. After spending a significant ammount of time trying to get it to work I ended up scrapping all that I had done because it was riddled with errors. I have changed my plan to first have solid player control and simple physics before concerning myself with box2d as it is mainly just for phyiscs interactions with world objects that would be complex to implement on my own. For now I've adjusted the scope to get the basic mechanics working properly before moving on to that.

The things that did go as planned were the basic frameworks. It took some refamiliarizing with the proper structure for a game application. But after a little while I managed to get the thread running properly for my update and draw loops and can now freely draw whatever I need to on the screen.

Sprint #2

Sprint Backlog

|  |  |  |  |
| --- | --- | --- | --- |
| **Story ID** | **Story / Task** | **Estimated**  **Hours** | **Actual**  **Hours** |
| 5 | create player controls | 2 | 4 |
| 5 | simulate jump physics | 2 | 3 |
| 6 | create paused game state | 2 | - |
| 3 | recognize player interaction | 2 | 3 |
| 4 | create player movement animation | 3 | - |
| 4 | menu/background animations? | 3 | - |

Review

Stories 5 and 3 were completed, were underestimated and ended up pushing out stories 6 and 4

Once again most work was done on behind the scenes activity so there still isn't much to look at.



Retrospective

This sprint went better than the first, but there were still some issues. There were a lot of unforseen obstacles I encountered, like the difficulty of discerning between the 4 types of collision, and the smoothing of movement by means of linear interpolation. This resulted in the estimations being very off. That being said, I'm happy with the progress regardless. I feel like I have a much better grasp on player movement, which I can further fine tune at a later date.

After this sprint began I realised that my prioritization was off. I want to focus entirely on getting essential mechanics pinned down before moving on to finer details and game states. Thus I have reprioritized a couple story items and shifted my focus for the next sprint plan. Additionally I got slightly sidetracked and began things that were not in the sprint plan, I intend to be more focused this next iteration.

Sprint #3

Sprint Backlog

|  |  |  |  |
| --- | --- | --- | --- |
| **Story ID** | **Story / Task** | **Estimated**  **Hours** | **Actual**  **Hours** |
| 8 | flesh out obstacle class | 2 |  |
| 8 | collision between obstacles | 2 |  |
| 8 | progress between obstacle screens | 2 |  |
| 9 | game over screen | 1 |  |
| 9 | new game state | 2 |  |
| 7 | slowed sliding with horizontal collision | 1 |  |
| 7 | add delayed fall to collision with top | 2 |  |
| 6 | add pause menu | 3 |  |