

TO MOON AND BACK

SAE921-GPR4100-CPlusPlus-Class-Sstyles-Box2D

“To Moon and back”

Infinite scroller

The “Game Design”

Game Design:

The basic game design is an **Infinite scroller**, a game in which the end is only defined by the players death

Inspiration :

Space Invaders. (Visual)
Into Space (Mechanics)

Goal:

Stay alive as long as possible

Game Problems:

- Saved score
- Start menu (start game, options, quit)
- End menu (restart, quit)

Game Improvements:

- Graphical Improvements.
- Sound Improvements.
- Game Mechanics (Character actions, ex: shooting ?).
- Game difficulty (improve difficulty over time).

Hierarchy :

- Main : Contains the [Game] :

 - Game **Constructor**, **Initialization** and **Loop**.

- Game : Contains All the the game elements:

 - Constructor** :

 - World & Gravity, Character, Contacts, trailManager, Music, Sound, Text.

 - Init()**: Initializes the Window, Window limits (boundaries)

 - BackGround elements, Game elements, UiElements

 - Loop()**: The loop is responsible for running the game

 - It is segmented in three parts : **Event Process**, **Physical Process**, **Graphical Process**

There are also Contact & Conversion Methods in the Game Class. Those are responsible for modifying objects values on contact, and dealing

Hierarchy :

- Classes : The Classes contain all the elements and methods to create the “Objects” (SFML & Box2D)
- Constructor** : The “Ctor” loads the sprites and basic elements
- Init()**: Initializes the SFML & Box2D Elements.
- Update()** : Updates the physical & graphical positions
- Draw()** : Draw all the elements.

Basically all the classes have the same hierarchy **EXCEPT** :
ContactListener, TextureManager, SMFL_Uilities, UserData.
Those are **SPECIAL CLASSES** used for Conversion & Contact.

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Thank you for listening !



TO TITAN
AND BACK

