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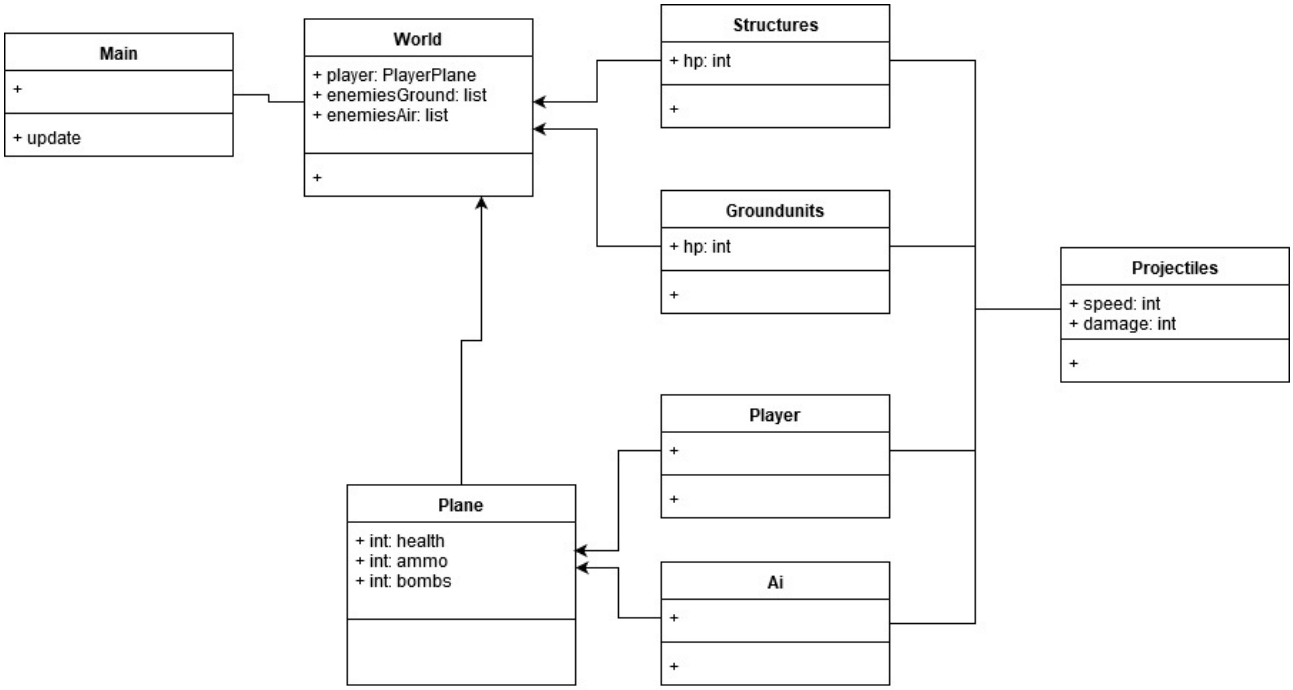
Project Plan: Air Combat

Basic plan

Our group will implement an Air Combat type game (see image 1: Triplane Turmoil) where the player controls the plain and tries to destroy enemy troops. Our plan is to implement all the basic features along with some of the additional features like different types of airplane weapons, different types of ground enemy troops and a simple AI enemy planes. We will also implement the multiplayer on the same keyboard if we have enough time. Our plan is to use SFML graphics library for the graphics and Box2D physics library for the physics. Our goal is to get 6-7p from the Project extensiveness category.

Image 1: Triplane Turmoil

Class hierarchy



In order to keep this graph as simple as possible we left out the graphic and physic libraries from it. It should, however, be evident witch of the classes use these libraries.

Gameplay

First thing the player sees when he/she starts the game is a simple menu with a few game related options. Player may choose a country they want to represent, a plane and the map. Menu will also have an info button where the player can find the how-to-play instructions. After all options have been set, the player can push the play button to proceed to the game itself. In the game player will have a task depending on the level to destroy the enemy base or destroy all the enemy troops and planes. Plane will have an arsenal of weaponry including machine gun and bombs. Player can adjust the forward velocity of the plane and the angle of the flight. Plane can also be flipped upside down in order to change the direction of the flight. If the enemy manages to destroy the airplane or the player crashes to the ground/wall before the objective of the map has been completed, player will lose a life. After all lives have been lost, player loses the game. But on the other hand, if

the player manages to pass the map, another map may be unlocked. Player will be awarded points by destroying the enemies and the game keeps track of the high score.

Schedule

Our plan is to work systematically on the project through the full 6 weeks and communicate through our groups Telegram chat.

The rough schedule is as follows:

Week 1: Implement the fundamental glasses and get familiar with the libraries.

Week 2: Work on the basic classes and start to build the graphics and the physics

Week 3: Work on the menu and the first map. All the main classes should be finished.

Week 4: Work on making the game play as good as possible and work on the second map.

Week 5: Implement the additional features and finishing touches on the game play.

Week 6: Polishing the game look and other final touches.

Roles of the group

Our plan is that everyone is familiar enough with every part of the project, but the main focuses will be divided like this (this is a rudimentary division and may be subject to change):

Jouni: Main software architect

Henri-Matias: Main gameplay designer and graphics designer

Patric: Back-end architect and level designer

Tommi: Physics designer and AI specialist