PROJECT

PLAN.

Arthur Stam.

Tygo Boons.

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**Chapter 1: Project description.**

Team name:

* Team GTRacing

Collaborators:

* Arthur Stam
* Tygo Boons

Project description:

* GTRacing Pro is a simple racing game that will mainly be about setting fast lap times in a car around a lap. The game will be made in the span of a about 4 weeks. The game will feature a realistic visual and will be fully created using Unreal Engine. The goal of the game will be to set faster laps and improve your high score.

**Chapter 2: Game-Design.**

**The game will contain (mechanics):**

* Reasonably realistic controllable car. 3rd person camera;
  + The car will be controlled by the player;
* Controllers. The game will be controlled via a keyboard or a controller;
  + Keyboard. A or D turning, W driving, S breaking;
  + Controller. Joystick turning, R2 driving, L2 breaking;
* Car choosing. You can choose the car you can play with and they will have different driving characteristics/stats;
  + Car characteristics/stats. Top speed, acceleration and car handling;
  + The player can choose between 3 cars. These cars will have the car characteristics/stats;
  + The player can choose there car when they click on the “Start” button;
  + Out lap after car choosing;
* Main Menu. The main menu will contain the “Start” and “Quit” buttons;
* Timer. The timer will start after the player finished an out lap;
  + Time stops after you hit the finish line again;
* High-score. The lowest lap time will be the highest score, this will be tracked;
* Crashing. The player can crash against the wall, the player needs to go back on the track them self;
* Pause Menu. A pause menu used to quit and reset the game.

**The player will (dynamics):**

* Try to improve their laptime;
* Try to cut corners in the track;
* Crash or hit the barrier;
* Choose the best car for them and their racing style;
* Try and minimize the time of the out lap;
* Use their preferred controller, will it be keyboard or controller;
* Try to exploit the timer or the track;

**The goal of the game will be (aesthetics):**

* Challenge, you will want improve your time and driving skill throughout playing the game.
* Submission, it will be easy to pick up and hard to master because the concept is quite simple.

**What will the game look like (visuals):**

* Afbeelding met auto, dak

  Automatisch gegenereerde beschrijvingAfbeelding met berg, lucht, buiten, weg

  Automatisch gegenereerde beschrijvingAfbeelding met weg, auto

  Automatisch gegenereerde beschrijvingThe game will look semi realistic and will be inspired by other racing sims. We will make it look like this by using third party models and assets;
* Afbeelding met weg, geel, auto, autoracen

  Automatisch gegenereerde beschrijvingAfbeelding met tekst, lucht, buiten, weg

  Automatisch gegenereerde beschrijvingAfbeelding met gras, buiten, hoogland, aarde

  Automatisch gegenereerde beschrijving

**MoSCoW prioritization**

M

S

C

W

Car controller;

Timer;

Car input.

Pause menu;

Main menu;

Car choosing;

High-score.

Crashing;

Car stats;

Switching from 3rd to 1ste person.

**Chapter 3: Asset list & Audiovisual concept.**

Assets:

* 3 3D car models;
* A 3D racetrack model;
* 3D trees for landscape;
* Material textures for landscape;
* 2D images for the menu buttons;
* 3D background for car choosing;
* 3D Pedestal model;
* 2D textures for switching between cars button;
* 2D Logo
* Car sound
* 3 Different soundtracks

**Chapter 4: Technical Design.**

Tools:

* Unreal engine 4 v4.27.2
* Visual studio 2022
* Unreal Blueprints
  + C++ classes will define to base structure of a Blueprint class. Blueprint classes are based on C++ classes;
  + Blueprints are the visual coding language of Unreal engine;
  + Blueprints will be used together with C++;
  + HUD Elements will be created using Blueprints.
* Github / Git
  + Source control





**Chapter 5: Planning.**

Week 5 (Sprint 1):

* Fully finished Game-design document; (Arthur)
* Fully finished Technical-design document; (Tygo)
* Project plan finished; (Arthur & Tygo)
* Beginning a Trello featuring these documents. (Arthur)

Week 6 (Sprint 2):

* Trello will be done; (Arthur)
* Finished PoC, with every Must from the MoSCoW table; (Arthur & Tygo)
* Making google forms for feedback; (Arthur)
* First feedback phase and updating Project plan. (Arthur & Tygo)

Week 7 (Sprint 3):

* Process feedback and add more content from the should from the MoSCoW table; (Arthur & Tygo)
* Update google forms; (Arthur)
* First true prototype done and another feedback phase; (Arthur & Tygo)
* Updating Project plan. (Arthur & Tygo)

Week 8 (Sprint 4):

* Process feedback and add more content from the could from the MoSCoW table; (Arthur & Tygo)
* feedback phase; (Arthur & Tygo)
* Add final touches and Process feedback; (Arthur & Tygo)
* Present game. (Arthur & Tygo)

Game-Design:

* Arthur Stam 75%
* Tygo Boons 25%

Programming:

* Arthur Stam 25%
* Tygo Boons 75%

Art/Assets:

* Arthur Stam 50%
* Tygo Boons 50%

**Chapter 6: Expected obstacles & difficulties.**

Arthur:

* Making the map. It is possible for me to go overboard or spend to long making the map.

Tygo:

* It is possible I encounter a system I don’t recognize in Unreal engine which will take a bit to figure out.