Wydział Automatyki,
Elektroniki i Informatyki
Politechniki Śląskiej w Gliwicach

Computer Graphics Project

Design Report

Topic: AEI Tower

Malika Uskembayeva

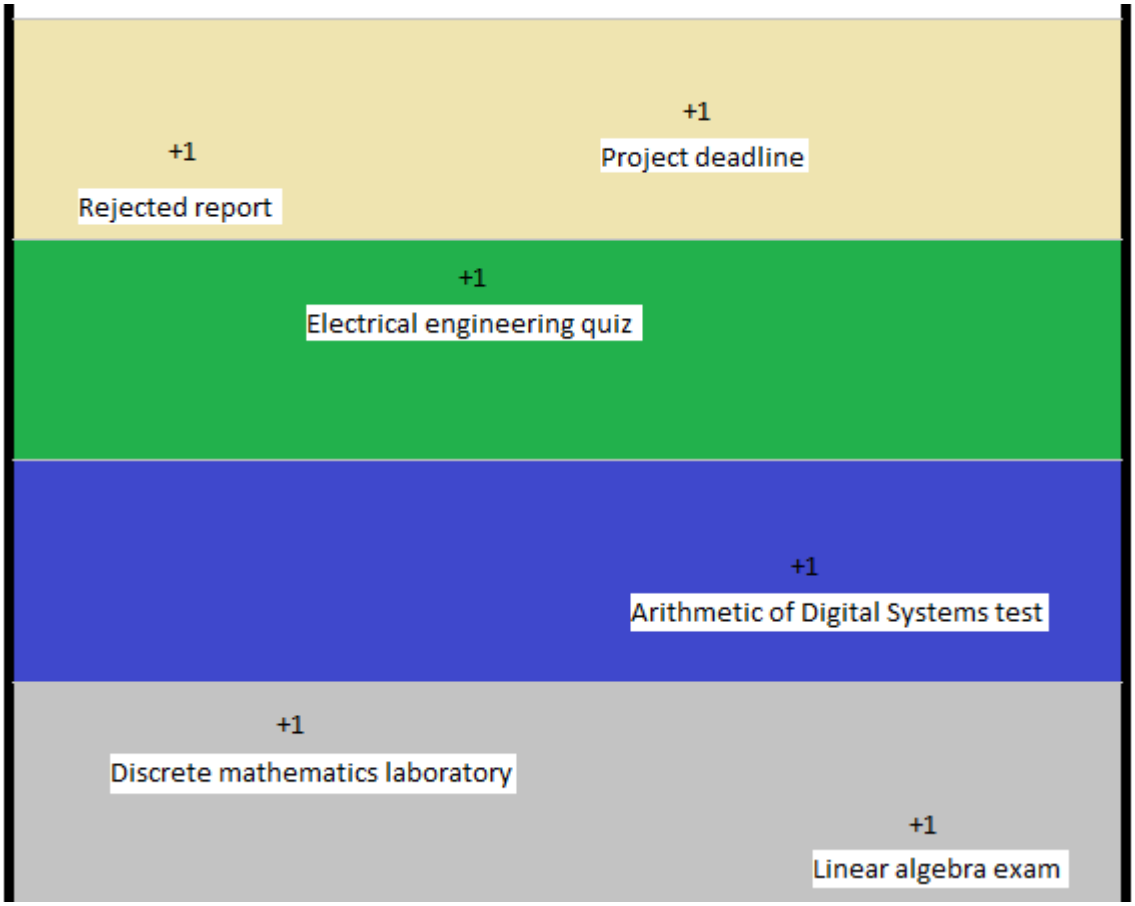
Adam Gembala

Robert Lotawiec

Description of the project

AEI Tower is a Icy Tower remake inspired by the day-to-day reality of students of the Faculty Of Automatic Control, Electronics And Computer Science. The game consists in controlling a character representing a student of the AEI faculty as he/she makes his/her way to the top of the Mage Tower by jumping on successive stairs and advancing to successive floors of the faculty. The character is controlled with the keyboard. It is a platform game set in a tower, where the player's goal is to jump from one "floor" to the next and go as high as possible without falling and plunging off the screen.

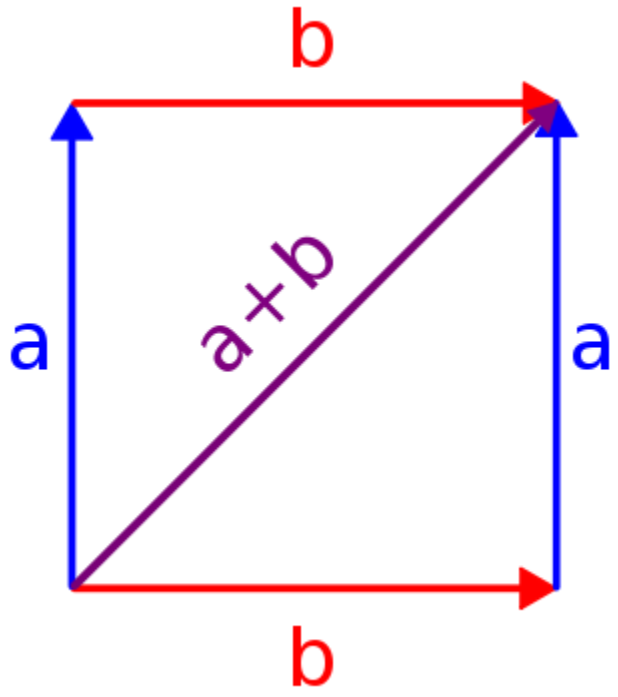
Platforms are grouped to levels - each in distinct color according to the colors of the faculty floors. On each platform there is randomly generated challenge which student faces in his day-to-day life (such as rejected report or unexpected quiz on the platform). Player has to collect 30 ECTS on each floor to level up. If player falls before collecting 26 ECTS on the level the game is over, otherwise he can use conditional pass, and collect missing points in order to complete level.



Task analysis

Theoretical basis of the problem

The movement of the character on the floor will be described by the sum of two vectors - horizontal and vertical. Sum of this two movements will be maginfied by some factor which will depend on the length of the period of pressing the space button.



While in the air player will only be able to control horizontal movement.

Computer graphics topics

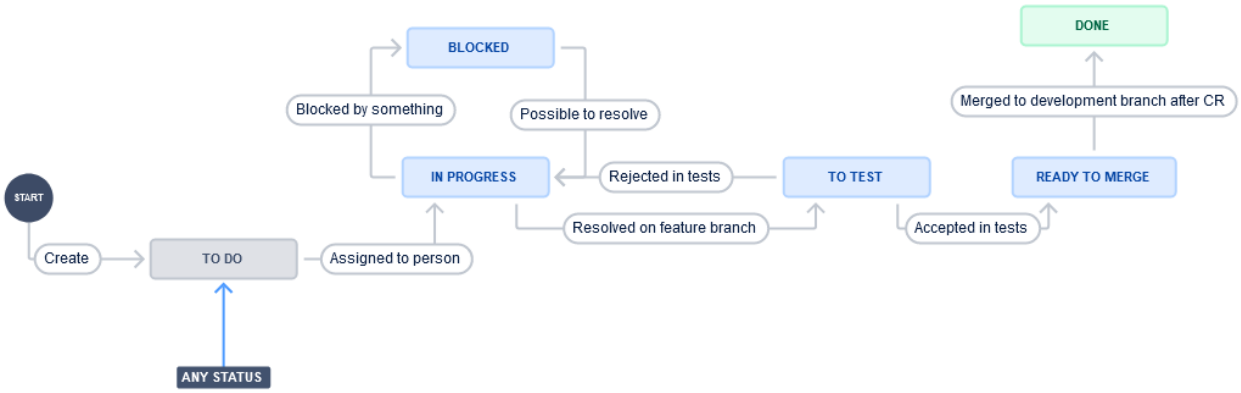
Project mostly utilize the knowledge from laboratories about collision detection, computer animation and colors. Game is implemented in C# with use of Unity engine.

Schedule

Person	30-03-2022	11-05-2022	22-06-2022
Malika Uskembayeva	Theoretical analysis of the project	Beta version of game logic	Final version of game logic
Adam Gembala	Theoretical analysis of the project	Beta version of game logic	Final version of game logic
Robert Lotawiec	Theoretical analysis of the project	Beta version of assets	Final version of assets

Project organization

Workflow



Useful links

Project organization

[Jira Project]

[GitHub Repository]