Personal Research

Random Map Generation

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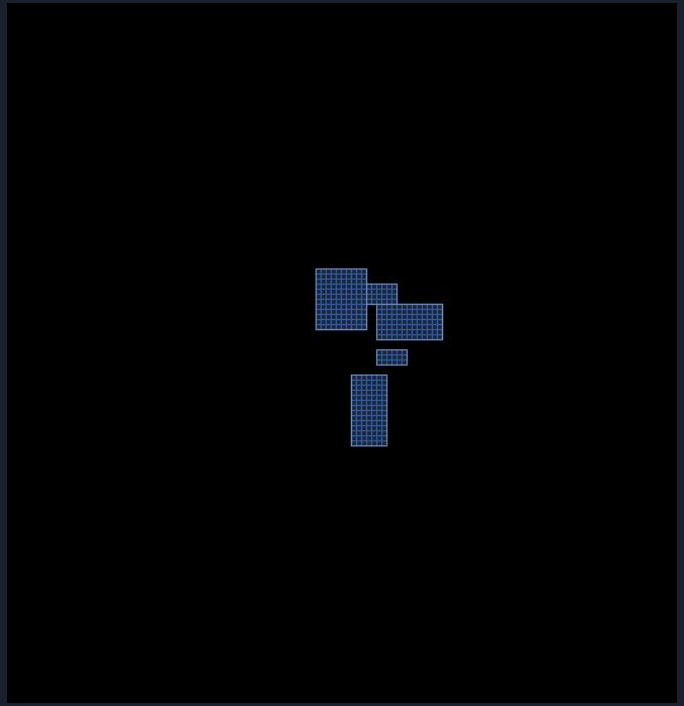
Project II

Index

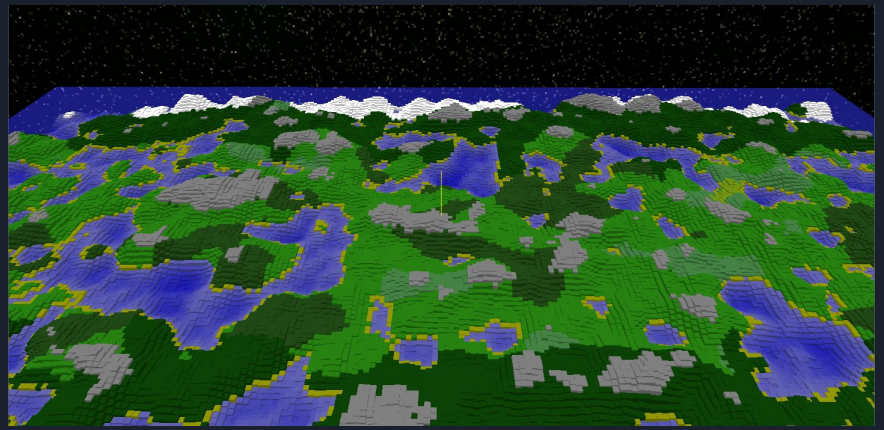
- What is a random generated map?
  + Brief definition
- What is good and what is bad about them?
- When you should use them?
  + Examples of successful implementations
-Two different types of mapping
  + How is each one implemented?



Introduction

- Map generated randomly by the computer
- New experience every game
- Each map typically follows a theme

Market Study



- Good aspects:
+ It can save development time
+ It increases replayability

- Bad aspects
+ Worlds can feel repetitive
+ The world might not be playable

- When you should use it?

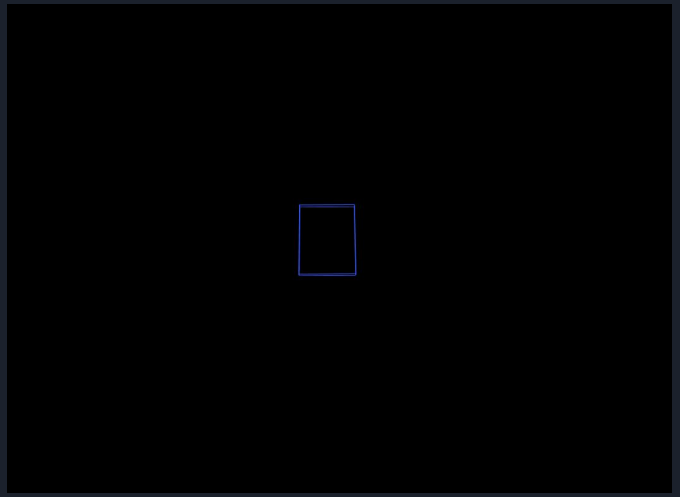
Games With Procedural Mapping

Select Approach

- Outdoor and Indoor Mapping

- Dungeon Generation
+ The plane is divided
+ Corridors are created to connect the rooms

- Perlin Noise
+ Created with maths, seed and a frequency
+ Variation from 0 to 1



Exercise

- Handout

Several TODO's to become familiar with the template and the Random Map Generation

https://github.com/Taks7/RandomMapGeneration/releases/tag/Exercises

- Solution

Results of all the different TODO's and the random generated map

https://github.com/Taks7/RandomMapGeneration/releases/tag/Solution

Citations

Information about the code implementation of a random map generator:

- https://github.com/Azgaar/Fantasy-Map-Generator

Detailed information on how to create a random dungeon:

- https://gamedevelopment.tutsplus.com/tutorials/create-a-procedurally-generated-dungeon-cave-system–gamedev-10099

Couple of useful videos to understand better how procedural generation works in video games:

- https://www.youtube.com/watch?v=ZZY9YE7rZJw&ab_channel=javidx9
- https://www.youtube.com/watch?v=jv6YT9pPIHw&ab_channel=BarneyCodes

Support library that has served to implement the code:

- FastNoise Library

Template used for the module:

- Code template used as a base for the Random Map Generation