GARBAGE TOWN

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✚ Short Description of the Project: --Description of the proposed application (~50-100 words, non-technical)

In this game we will manage the pollution level of a town using limited resources such as money and time. Town has different size buildings like apartments,public buildings,facilities. You will be able to build green power systems like solar system or wind turbines also you can upgrade recycling facility which allows you collect garbage faster. With sound effects you will be ready to be in chaos. Despite all the limited resources if you want to be a good governer you have to hurry up before pollution gets out of hand.

✚ Detailed Project Proposal (~300-500 words, be as technical as possible, using terms and methods from Computer Graphics context) including:

- ## The selected topic for the application and how it relates to the theme (~100-200 words)

  There are several ways to show environmental problems, we chosen a more creative idea. We decided to make a game. In that game demonstrates a town's struggle with environmental problems such as air pollution and environmental pollution. We are focusing on garbage accumulation, air pollution, green-power production and climate change.User will try to reduce pollution by using different solution approaches. After each decision the user makes there will be tips about environmental issues. Thanks to this game, we create awareness in players about environmental problems and their solutions.Players of this game will have fun besides learning the effects of some environmental problems.

- ## The selected CS algorithm/method in detail: how it will be made use of and how it will be animated (~100-200 words)

  At our desposal we have a single garbage-truck in the town. This town structure is grid-shaped.. We are trying to find the shortest path which goes over garbage accumulated in the town. Each line of the grid actually represents the roads in town. As long as new garbage appears, our truck going over these lines and proceeds to the garbage in the shortest way. We imagine town like a binary maze.Some road may be blocked by traffic,people, rubble,rock or there may not be a road at all between intersections. This blocked areas seems like 0's in binary maze and open roads seems 1's.

- ## Subject topics from BBM412 context and how they will be reflected in the project.

  We will use isometric projection of 3d objects. We will use geometric afine transformations such as translations,rotation and scaling. In project design we use lightning and texture mapping a lot.
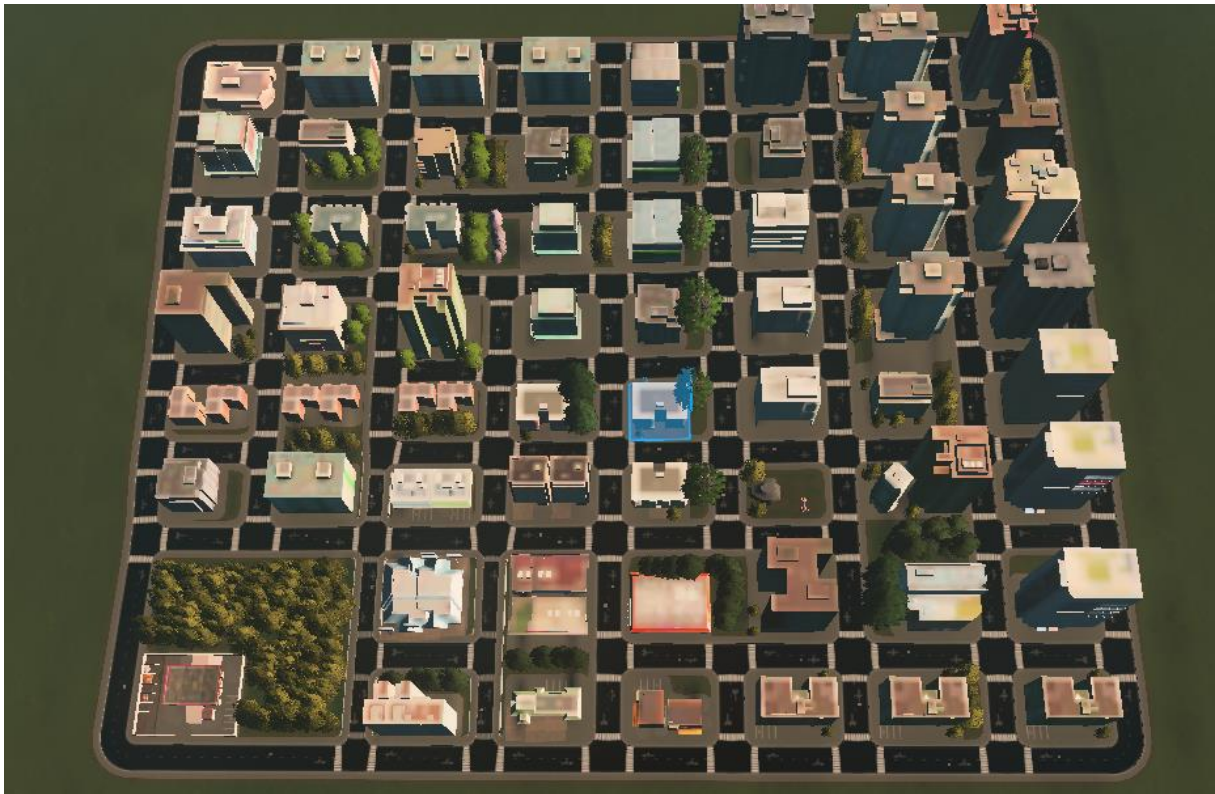
- **Visual Drafts**
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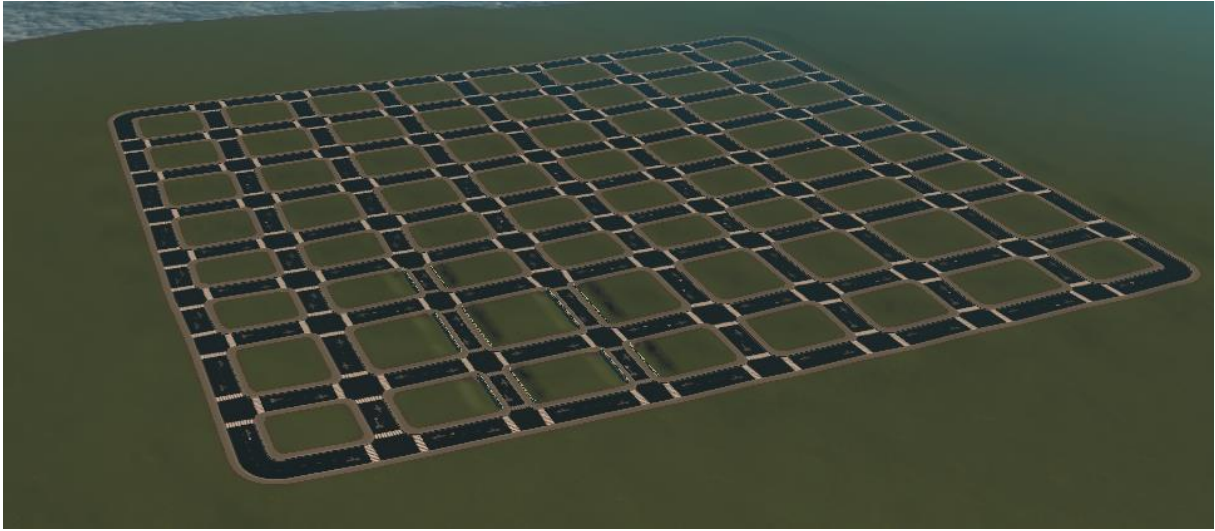
-map structure

- **References**

  - https://webgl2fundamentals.org/
  - https://www.cs.unm.edu/~angel/BOOK/INTERACTIVE_COMPUTER_GRAPHICS/SEVENTH_EDITION/
  - Three.js
  - Babylon.js
  - PhiloGL
  - jQuery

and maybe it more…