

Weekly Report 1

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Course: Aineopintojen harjoitustyö: Tietorakenteet ja algoritmit (loppukesä 2021)

Working hours during the week

9.5 hours

Done during the week

- Choosing topic for the project and defining scope
- Initializing project locally and on GitHub
- Investigating and choosing suitable data sources
 - Data chosen to be collected from Wikipedia (as it is very easily collectable), including coordinates for Finnish cities, data of all Finnish highways, distances between cities along highways, and highway types which define speed limits
- Getting high-level understanding of most suitable shortest path finding algorithms and choosing which ones to use in the project
- Requirements documentation written

How program has evolved?

I haven't yet started writing program code.

What I learned during the week?

I learned from where to get suitable geographic data for Finnish cities and distances along highways between them.

I also learned which are the best/most efficient shortest path finding algorithms there exist.

What remained unclear or created trouble?

Something I still consider is Wikipedia data of high-enough quality for this project. 😊

Reason why I ended up using Wikipedia data in this project is that data is very easily collectable and free in Wikipedia. If it ends up that Wikipedia data is not of high-enough quality, I need to investigate where to get equivalent data. Based on my initial investigation, it seems that similar data is not as easily collectable/free from other sources.

Also, JPS and IDA* algorithms I only understood on very high level – I assume these will become familiar in the weeks to come. 😊

What will I do next?

- Start writing program code
- Investigate how to visualize city locations and connections (highways) between them
 - This will most likely involve techniques I don't know yet
- Study the shortest path finding algorithms chosen
- Start to program these algorithms