Universiti Teknologi MARA

Population Analysis in Aspect of Specifying Suitable Property Area using Data Driven Documents (D3) Data Visualization Technique

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SUPERVISOR'S APPROVAL

POPULATION ANALYSIS IN ASPECT OF SPECIFYING SUITABLE PROPERTY AREA USING DATA DRIVEN DOCUMENTS (D3) DATA VISUALIZATION TECHNIQUE

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This thesis was prepared under the direction of thesis supervisor, Nur Azmina Binti Mohamad Zamani. It was submitted to the Faculty of Computer and Mathematical Sciences and was accepted in partial fulfilment of the requirements for the degree of Bachelor of Computer Science (Hons).
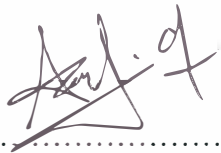
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Nur Azmina Binti Mohamad Zamani
Thesis Supervisor

January 28, 2019

DECLARATION

I certify that this report and the research entitles Population Analysis in Aspect of Specifying Suitable Property Area using Data Driven Documents (D3) Data Visualization Techniques which it refers are the product of my own research and that any ideas or reference from the work of other researcher, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

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ABSTRACT

In the era of globalization, data information are increasing day by day where more daily data continue to increase across the globe. Data is important and can be confidential to certain industries or organizations that can make the data meaningful. Data of population nowadays become a trend of analysis that can make some prediction on development based on the population data. Problem statements defined in this project are the data information on population are left unstructured and disorganized due to lack information. As consequences to this problem, it can be hard to analyse the unpredicted data of the population area. This project aims to perform population analysis in aspect of specifying suitable property area with Data Driven Documents (D3) data visualization method. The objectives of this project are to analyse data with visualization using D3 tool and make prediction on the population for the year 2020 in Perak state. D3 technique is a technique to visualize the data interactively and dynamically. The methodology of this project involves planning, design, analysis, testing and maintenance. The data of population are collected and organized manually from the Department of Statistics Malaysia (DOSM) page that are stored into the database which is CSV file. This extracted data is being implemented on the parallel coordinate graph to display the data to make it more user-interactive. Analysis phase defines a suitable method to analyse about the data population. Exponential model equation method are suitable in making the prediction of the future population of Perak state in year 2020. The prediction data are implemented and displayed on D3 interactive map to provide the meaningful information for user. The case study about Perak state has been done by defining the number of districts in Perak and the year of prediction is 10 years from the available collected data. In conclusion, the benefit of this project is to ease the user to gain useful information about the population in Perak state by having an early planning for the future development.