# Location Based Selling Platform for Mobile Buyers

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# Declaration

I declare that this thesis is my own work and has not been submitted in any form for another degree or diploma at any university or other institution of tertiary education. Information derived from the published or unpublished work of others has been acknowledged in the text and a list of references is given.

Name of Student — Signature of Student

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Mr. Saminda Premarathna — ……

Date:

# Dedication

This dissertation is dedicated to my bellowed mother, father who gave me endless courage and support to achieve my tasks whenever I discouraged.

# Acknowledgement

My heartiest thanks should go to my supervisor Mr. Saminda Premarathna for the guidance, assistance, encouragement and providing this opportunity to do the research on this field.

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# Abstract

Online selling and buying products by using online services is very popular today. It is a very popular method in western countries and getting more and more popular in the Sri Lankan community also. At the beginning people did online purchases with a personal computer. But now we can see that there is an emerging trend towards using mobile internet. Improvements in fast $4^{th}$ generation mobile internet connections and very sophisticated mobile phones people are now not restricted to purchase online services with a personal computer. We can see that old simple mobile phones have been replaced with fast multipurpose smart phones powered with improved operating systems such as android, iOS and Windows etc. In addition to that we can see that the mobile phones have the capability of obtaining the location of the device using GPS technology. Even the mobile phones are sophisticated we can see that we are not getting the full capability of that when it comes to online selling. Due to that reason we can see that there is a good research area to provide a location based selling service with available data mining techniques, location services and Google map technologies.

Aim of this research project is to implement a web service based, mobile enabled location based selling platform to register Sri Lankan sellers, so that mobile enabled buyers/customers can find best deals and purchase nearby services from sellers. Buyer's location is obtained from the GPS technology embedded in the mobile phone and products and services available close to their location are displayed with the help of Google maps. Some data mining algorithms running in the server are used to provide the best prices and suggestions about products to the user.

Test cases were written to test the each functionality to cover predefined functional and non-functional requirements. After verifying the functionality with testing, developed application was tested by feeding 100 sample sellers and more than 100 sample buyers to the application hosted in the web server. Sample set of deferent products were assigned to each seller. Set of mobile users were asked to install the application and requested to search the product they want. Application showed the available products based on the location provided in the mobile phone. Based on the collected feedback from the users, they have mentioned that showing product location in the Google map and suggesting product to the customer based on their buying pattern as the major innovative implementations.

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