1/31/2017

Project Proposal

EXIT6 – Trip Planning Application for Singapore

Delivered by,

EXIT6 Team

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Table of Contents

List of Tables

List of Figures

Executive Summary

Travelling is one of the very popular leisure activities across the globe. According to one statistics collection agency, Eurostat, in the European Union alone, there were 181 million trips planned for the year 2014 cumulatively accounting for 181 million nights of travel (Eurostat, 2017). Travelling to new regions require significant planning from the travelers to be able to enjoy all the attractions in the regions in a limited period of time (Yoon, 2010). Trip planning has been extremely difficult for the travelers as there are too many attractions to choose from, making the activity arduous, stressful and painful.

The primary aim of this application is to provide the opportunity for the users to better experience Singapore. The benefits will be three fold, primarily the application will benefit the overseas travelers coming to Singapore to better plan their trip for their short duration of stay and experience Singapore in its best form. Secondly, the application can provide intelligent suggestions to the local users and inform them of the 'Hottest Activity' in their vicinity, for a short escapade of enjoyment. Finally, the application can improve the sales of the business owners in Singapore, driving new customers to them.

This project focuses on outlining the design of the 'EXIT6' Trip planning application in which Agile Methodology will be used for the project development. The team will be tasked with the design, development, implementation, testing and maintenance of the application.

During the design and development phase of the project, the team will be divided into two parts focusing on different aspects of the project, namely (1) Interactive and rich Android based Front-end for interaction and (2) Server-side application for supporting multiple clients accessing information, planning their trips simultaneously.

Problem Definition

The increasing per-capita income of the population has had a direct consequence on the type of leisure activities undertaken by the people. The standard of living along with the thrill to explore has forced the travelers to explore new locations and experiment with new delicacies. Singapore has always been a popular destination for travelers willing to experience a rich multi-cultural society. According to the Visitor Arrival Statistics Report (SIngapore Tourism Board, 2017) published by the Singapore Tourism Board, nearly 15 million tourists arrived in Singapore in the Calendar year of 2016.

The tourism industry in Singapore is huge with the total Tourism Reports of the industry amounting to S$21.8 billion (Singapore Tourism Board, 2015). Almost 60% of the trips to Singapore are meant for leisurely activities with the average length of stay being 3.6 days. As such, there is no available trip planning application which along with considering the interests of the user, be able to plan a complete day of fun-filled activities. The current applications in the market usually omit the planning phase of half the trip day resulting in a disappointing trip for the user.

As an attempt to improve the planning of the trips within Singapore, the EXIT6 team will aim to optimize the data-collection, trip-planning and crowd management by providing with intelligent ‘Suggested Trips’ to the users. The users will also be able to modify and re-plan parts or the complete trip as per their convenience, with the application giving them with useful suggestions while doing the same.

Objectives

This document is the proposal for the design, development, testing and maintenance of a Trip planning application EXIT6 aimed at optimizing the travel to Singapore. As such, the EXIT6 aims to provide the users with two options, the overseas users', who can plan entire trips for durations up-to 7 days and the 'What's Hot' option aimed at the local Singaporean users giving them with suggestions on the best activities in their vicinity. As such, since a wide variety of people will be using the application, following considerations have to be made:

1. Interactive and intuitive User Interface to minimize the learning time
2. Quick Trip planning to minimize the wait-time for trip calculations
3. Budget of the user taken into consideration as a filter

The first objective of developing interactive and intuitive application will be achieved by approaching the task with the goal of minimalism, The UI prototype for the same will be developed first and User-Testing will be performed to check its viability.

Since the application is developed in Android and has to be supported on wide variety of phones with different computational power, the trip calculation will be done on the server-side and the result will be communicated to the user.

Different filters need to be provided to help users choose their preferences of the places. The filters being considered are 'Budget', 'Attractions', 'Restaurants', 'Special Events'. The filters will streamline the search for the best trip.

Technical Approach

Identifying the needs of Customers

The EXIT6 Trip Planning application targets travelers using Android Mobile phones aged from 20 years to 60 years. These are the age-group of population who are well-versed with the usage of Android phones. The age group from 20-40 years are the age group who can readily understand the complex nuances of an application and are willing to experiment different possibilities,

however the age group from 40-60 years will require something simple and easy on the eyes. For the purpose of catering the different categories, a simple and intuitive User Interface is to be designed for the application.

The users might not have stable internet connection on their trips. For this reason, they need to be able to save their planned trips to their local devices. Alternatively, they must be able to export their planned trips to other calendars such as 'Google Calendar' or 'Outlook Calendar'. Thus an export function to Google Calendar is to be provided in the application.

The users must also be able to login from other devices and be able to retrieve their plan details, as such all the planned trip information will be stored in the database to facilitate the same.

Identifying Target Specifications

The application could be potentially used by millions of people and many of them might not be willing to experiment with the application. To facilitate the easy understanding of the application and its features, a step-by-step procedure will be employed to train the users in the beginning. Simple recommended trips will also be provided by the application to prevent from the hassle of entering the filters and waiting for a planned trip.

Additionally, when the user is trying to modify trips, information clipping regarding the attractions/restaurants/events will be provided.

Generating Design Concepts

Based on the functional requirements and use-cases of the application, the EXIT6 team has come up with the set of metrics to compare the quality of the design concepts

Modularity

The application is divided into separate modules with each module being independent from the other. Modularity helps in re-use of the components of the system without re-writing the entire code. Additionally, individual modules are easy to test and maintain in the longer run. This modular system of project development will prevent development delays and will ensure that the project will be completed on time.

Robustness

Since the application has to work in various different mobile handsets, the front end application must be robust and must also be able to support various mobile devices

Abstraction

The application must abstract all the complex trip planning process and must only display the final route with the essential information to the user.

Usability

The application must be usable by all the users from the age group between 20 to 60 years of age as explained in the section, Identifying the needs of the Customers. As such special considerations need to be taken for providing service to Users with special Needs.

Table 1 Design Concepts

Design Concepts	Description
Object-Oriented Design	In an object oriented designed system, the design is class based and the objects interact with each other with minimal dependency. This allows the application to maintain loose coupling.
Event-driven Design	The flow of the system is triggered by the actions such as button presses or any other type of events. When triggered, system executes the relevant functions.
Function-oriented Design	The system will share a centralized system state and local function states will be terminated once the function finishes its execution.

Selecting the design state

The design concept to be used for designing this application is the combination of Object-Oriented Design and Event-driven design.

The events will be generated by user using the Android application and it will trigger the internal functions requesting information from the server. The server will be designed using Object-Oriented

design principles. All the OOP concepts such as modularity, encapsulation, abstraction will be ensured in the application design. Care will also be taken to ensure that the design is extensible and scalable to potentially support millions of users who will be querying the server with information at the same time. The system is aimed to be loosely coupled with very high cohesion.

Project Management

Project Plan flow

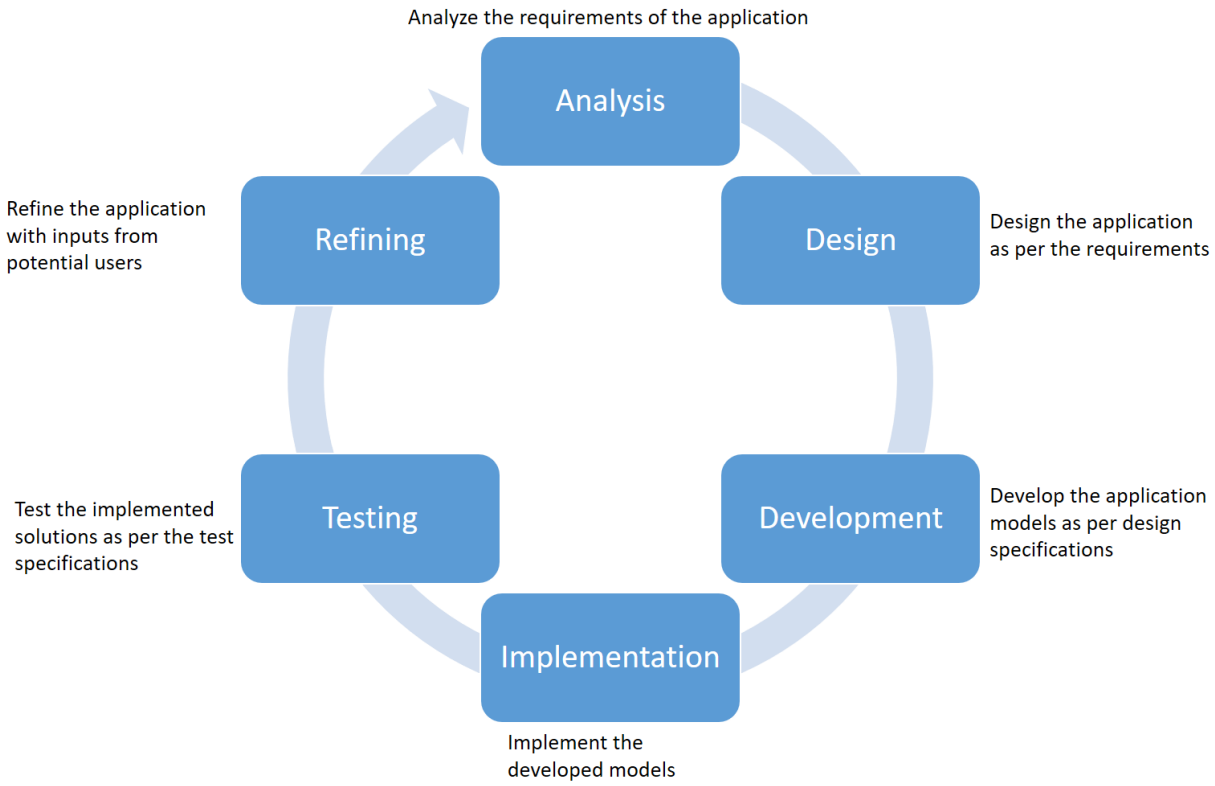


Figure 1 Agile Methodology

Agile methodology is to be deployed for the development of the application. The above Figure 1 shows the cyclic process which is to be used for the same.

The design phase has two parts, namely the Basic Lo-Fi design which sketches the basic design as per the requirements and then developing a complete Hi-Fi design.

Once the Design, Development and Implementation is completed, the QA team will test the application against the requirements. In the refining phase, the application is shown to the users and is refined further with new analysis.

Work Breakdown Structure

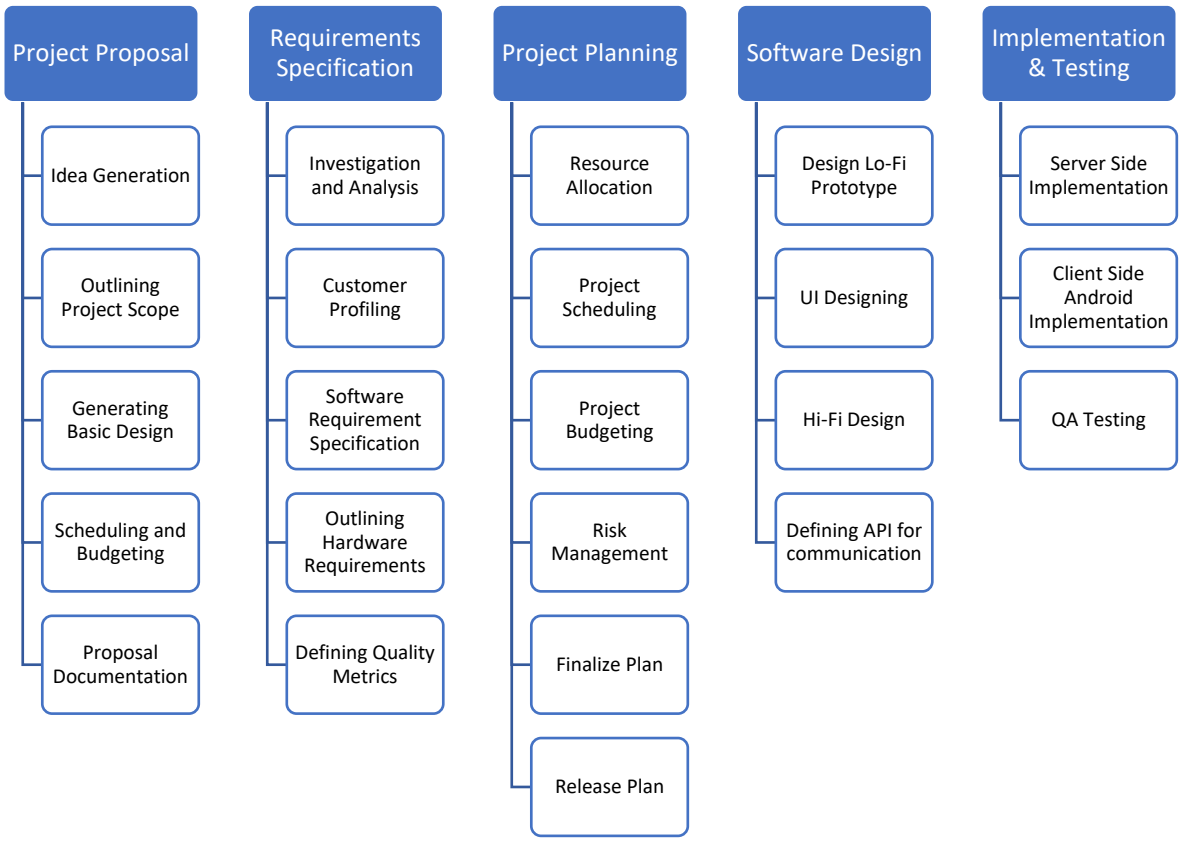


Figure 2 Work Breakdown Structure

The work breakdown structure describes the processes involved in the project life-cycle in detail in the following pages.

Table 2 Work Breakdown Schedule

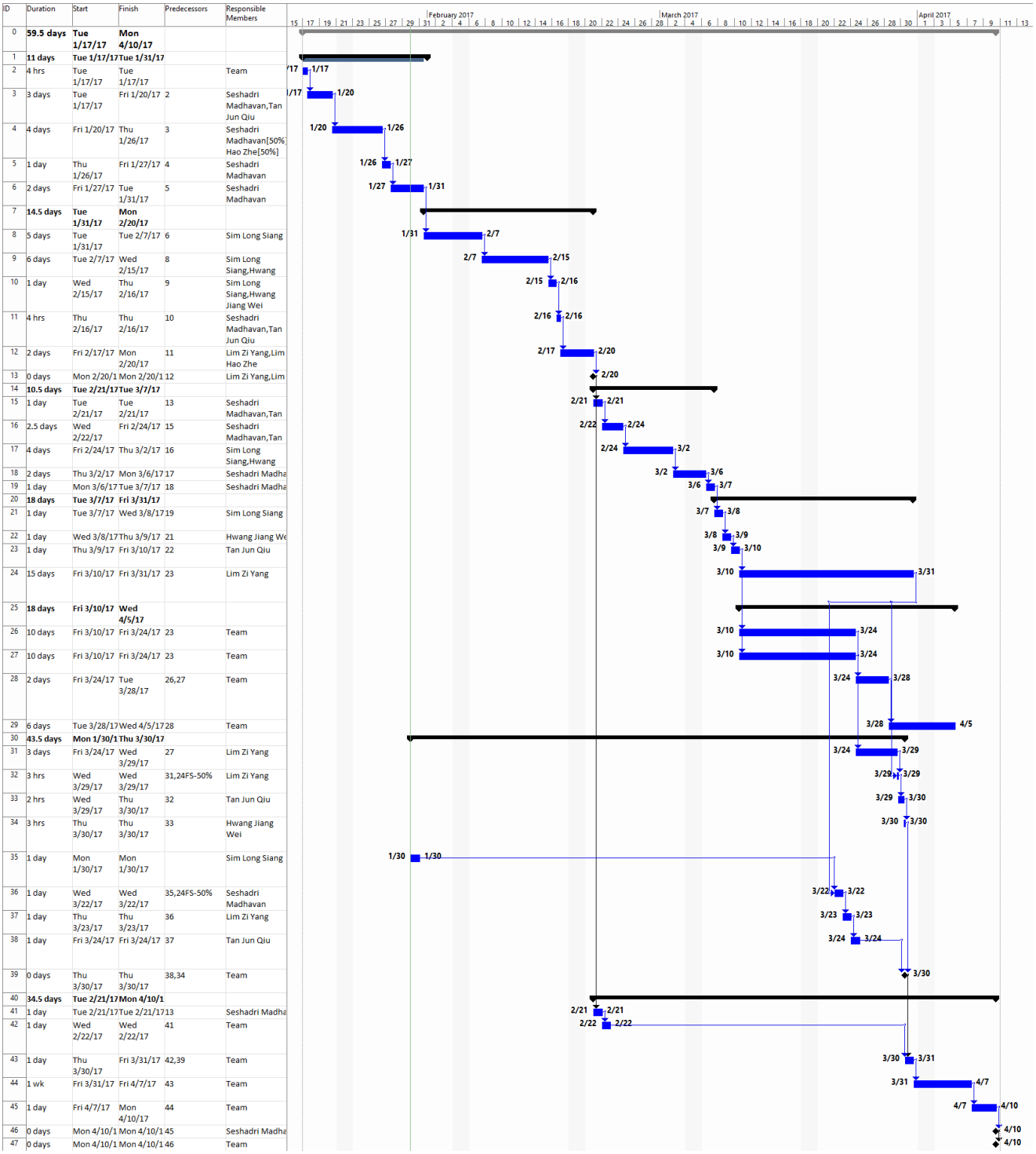
Task Name	Duration	Start Date	End Date	Predecessor	Accountable People
Software Development	**59.5 days**	**Tue 1/17/17**	**Mon 4/10/17**		
Project Proposal	**11 days**	**Tue 1/17/17**	**Tue 1/31/17**		
Idea Generation	4 hrs	Tue 1/17/17	Tue 1/17/17		Team
Outlining Project Scope	3 days	Tue 1/17/17	Fri 1/20/17	2	Seshadri Madhavan, Tan Jun Qiu
Generating Design Concepts	4 days	Fri 1/20/17	Thu 1/26/17	3	Seshadri Madhavan[50%], Lim Hao Zhe[50%]
Scheduling and Budgeting	1 day	Thu 1/26/17	Fri 1/27/17	4	Seshadri Madhavan
Proposal Documentation	2 days	Fri 1/27/17	Tue 1/31/17	5	Seshadri Madhavan
Requirements Specification	**14.5 days**	**Tue 1/31/17**	**Mon 2/20/17**		
Investigation and Analysis	5 days	Tue 1/31/17	Tue 2/7/17	6	Sim Long Siang
Customer Profiling	6 days	Tue 2/7/17	Wed 2/15/17	8	Sim Long Siang, Huang Jiang Wei
Software Requirement Specifications	1 day	Wed 2/15/17	Thu 2/16/17	9	Sim Long Siang, Huang Jiang Wei
Outlining Hardware Requirements	4 hrs	Thu 2/16/17	Thu 2/16/17	10	Seshadri Madhavan, Tan Jun Qiu
Defining Quality Metrics	2 days	Fri 2/17/17	Mon 2/20/17	11	Lim Zi Yang, Lim Hao Zhe
Analysis complete	0 days	Mon 2/20/17	Mon 2/20/17	12	Lim Zi Yang, Lim Hao Zhe
Project Planning	**10.5 days**	**Tue 2/21/17**	**Tue 3/7/17**		
Resource Allocation	1 day	Tue 2/21/17	Tue 2/21/17	13	Seshadri Madhavan, Tan Jun Qiu
Project Scheduling	2.5 days	Wed 2/22/17	Fri 2/24/17	15	Seshadri Madhavan, Tan Jun Qiu
Risk Management	4 days	Fri 2/24/17	Thu 3/2/17	16	Sim Long Siang, Huang Jiang Wei

Finalize Plan	2 days	Thu 3/2/17	Mon 3/6/17	17	Seshadri Madhavan
Release Plan	1 day	Mon 3/6/17	Tue 3/7/17	18	Seshadri Madhavan
Software Design	**18 days**	**Tue 3/7/17**	**Fri 3/31/17**		
Design Lo-Fi Prototype	1 day	Tue 3/7/17	Wed 3/8/17	19	Sim Long Siang
UI Designing	1 day	Wed 3/8/17	Thu 3/9/17	21	Huang Jiang Wei
Design Hi-Fi Prototype	1 day	Thu 3/9/17	Fri 3/10/17	22	Tan Jun Qiu
Defining API for Communication	15 days	Fri 3/10/17	Fri 3/31/17	23	Lim Zi Yang
Implementation and Testing	**18 days**	**Fri 3/10/17**	**Wed 4/5/17**		
Server Side Implementation	10 days	Fri 3/10/17	Fri 3/24/17	23	Team
Client Side Implementation	10 days	Fri 3/10/17	Fri 3/24/17	23	Team
Developer Testing (primary debugging)	2 days	Fri 3/24/17	Tue 3/28/17	26,27	Team
QA Testing	6 days	Tue 3/28/17	Wed 4/5/17	28	Team
Documentation	**43.5 days**	**Mon 1/30/17**	**Thu 3/30/17**		
Develop Help specification	3 days	Fri 3/24/17	Wed 3/29/17	27	Lim Zi Yang
Develop Help system	3 hrs	Wed 3/29/17	Wed 3/29/17	31,24FS-50%	Lim Zi Yang
Review Help documentation	2 hrs	Wed 3/29/17	Thu 3/30/17	32	Tan Jun Qiu
Incorporate Help documentation feedback	3 hrs	Thu 3/30/17	Thu 3/30/17	33	Huang Jiang Wei
Develop user manuals specifications	1 day	Mon 1/30/17	Mon 1/30/17		Sim Long Siang
Develop user manuals	1 day	Wed 3/22/17	Wed 3/22/17	35,24FS-50%	Seshadri Madhavan
Review all user documentation	1 day	Thu 3/23/17	Thu 3/23/17	36	Lim Zi Yang
Incorporate user documentation feedback	1 day	Fri 3/24/17	Fri 3/24/17	37	Tan Jun Qiu
Documentation complete	0 days	Thu 3/30/17	Thu 3/30/17	38,34	Team
Pilot	**34.5 days**	**Tue 2/21/17**	**Mon 4/10/17**		

Identify test group	1 day	Tue 2/21/17	Tue 2/21/17	13	Seshadri Madhavan
Develop software delivery mechanism	1 day	Wed 2/22/17	Wed 2/22/17	41	Team
Install/deploy software	1 day	Thu 3/30/17	Fri 3/31/17	42,39	Team
Obtain user feedback	1 wk	Fri 3/31/17	Fri 4/7/17	43	Team
Evaluate testing information	1 day	Fri 4/7/17	Mon 4/10/17	44	Team
Pilot complete	0 days	Mon 4/10/17	Mon 4/10/17	45	Seshadri Madhavan
Release	0 days	Mon 4/10/17	Mon 4/10/17	46	Team

Work Breakdown Schedule – Gantt Chart

The following figure describes the schedule of the project as a Gantt Chart depicting the schedule and timeline for each of the tasks.



ID	Duration	Start	Finish	Predecessors	Responsible Members
0	**59.5 days**	**Tue 1/17/17**	**Mon 4/10/17**		
1	**11 days**	**Tue 1/17/17**	**Tue 1/31/17**		
2	4 hrs	Tue 1/17/17	Tue 1/17/17		Team
3	3 days	Tue 1/17/17	Fri 1/20/17	2	Seshadri Madhavan,Tan Jun Qiu
4	4 days	Fri 1/20/17	Thu 1/26/17	3	Seshadri Madhavan[50%] Hao Zhe[50%]
5	1 day	Thu 1/26/17	Fri 1/27/17	4	Seshadri Madhavan
6	2 days	Fri 1/27/17	Tue 1/31/17	5	Seshadri Madhavan
7	**14.5 days**	**Tue 1/31/17**	**Mon 2/20/17**		
8	5 days	Tue 1/31/17	Tue 2/7/17	6	Sim Long Siang
9	6 days	Tue 2/7/17	Wed 2/15/17	8	Sim Long Siang,Hwang
10	1 day	Wed 2/15/17	Thu 2/16/17	9	Sim Long Siang,Hwang Jiang Wei
11	4 hrs	Thu 2/16/17	Thu 2/16/17	10	Seshadri Madhavan,Tan Jun Qiu
12	2 days	Fri 2/17/17	Mon 2/20/17	11	Lim Zi Yang,Lim Hao Zhe
13	0 days	Mon 2/20/1	Mon 2/20/1	12	Lim Zi Yang,Lim
14	**10.5 days**	**Tue 2/21/17**	**Tue 3/7/17**		
15	1 day	Tue 2/21/17	Tue 2/21/17	13	Seshadri Madhavan,Tan
16	2.5 days	Wed 2/22/17	Fri 2/24/17	15	Seshadri Madhavan,Tan
17	4 days	Fri 2/24/17	Thu 3/2/17	16	Sim Long Siang,Hwang
18	2 days	Thu 3/2/17	Mon 3/6/17	17	Seshadri Madha
19	1 day	Mon 3/6/17	Tue 3/7/17	18	Seshadri Madha
20	**18 days**	**Tue 3/7/17**	**Fri 3/31/17**		
21	1 day	Tue 3/7/17	Wed 3/8/17	19	Sim Long Siang
22	1 day	Wed 3/8/17	Thu 3/9/17	21	Hwang Jiang We
23	1 day	Thu 3/9/17	Fri 3/10/17	22	Tan Jun Qiu
24	15 days	Fri 3/10/17	Fri 3/31/17	23	Lim Zi Yang
25	**18 days**	**Fri 3/10/17**	**Wed 4/5/17**		
26	10 days	Fri 3/10/17	Fri 3/24/17	23	Team
27	10 days	Fri 3/10/17	Fri 3/24/17	23	Team
28	2 days	Fri 3/24/17	Tue 3/28/17	26,27	Team
29	6 days	Tue 3/28/17	Wed 4/5/17	28	Team
30	**43.5 days**	**Mon 1/30/1**	**Thu 3/30/17**		
31	3 days	Fri 3/24/17	Wed 3/29/17	27	Lim Zi Yang
32	3 hrs	Wed 3/29/17	Wed 3/29/17	31,24FS-50%	Lim Zi Yang
33	2 hrs	Wed 3/29/17	Thu 3/30/17	32	Tan Jun Qiu
34	3 hrs	Thu 3/30/17	Thu 3/30/17	33	Hwang Jiang Wei
35	1 day	Mon 1/30/17	Mon 1/30/17		Sim Long Siang
36	1 day	Wed 3/22/17	Wed 3/22/17	35,24FS-50%	Seshadri Madhavan
37	1 day	Thu 3/23/17	Thu 3/23/17	36	Lim Zi Yang
38	1 day	Fri 3/24/17	Fri 3/24/17	37	Tan Jun Qiu
39	0 days	Thu 3/30/17	Thu 3/30/17	38,34	Team
40	**34.5 days**	**Tue 2/21/17**	**Mon 4/10/1**		
41	1 day	Tue 2/21/17	Tue 2/21/17	13	Seshadri Madha
42	1 day	Wed 2/22/17	Wed 2/22/17	41	Team
43	1 day	Thu 3/30/17	Fri 3/31/17	42,39	Team
44	1 wk	Fri 3/31/17	Fri 4/7/17	43	Team
45	1 day	Fri 4/7/17	Mon 4/10/17	44	Team
46	0 days	Mon 4/10/1	Mon 4/10/1	45	Seshadri Madha
47	0 days	Mon 4/10/1	Mon 4/10/1	46	Team

Figure 3 Work Breakdown Schedule: Gantt Chart

Deliverables

Following is the list of deliverables required to be submitted for the project. They also serve as some milestones in our project.

Table 3 Deliverables Schedule

Deliverables	Date of Delivery	Mode of Delivery
Project proposal	31st January 2017	Team Wiki
System requirement specification	14th February 2017	Team Wiki
Quality plan	14th February 2017	Team Wiki
Use case Diagram	14th February 2017	Team Wiki
Project plan	7th March 2017	Team Wiki
Risk management	7th March 2017	Team Wiki
Prototype visualization	7th March 2017	Team Wiki
Code, video and documentation	7th March 2017	SVN
Design report on software Maintainability	21st March 2017	Team Wiki
Configuration Management plan	21st March 2017	Team Wiki
Release plan	21st March 2017	Team Wiki
Enhanced prototype	4th April 2017	SVN
Test plan	4th April 2017	Team Wiki
Test cases and requirement test coverage report	4th April 2017	Team Wiki
CMM level 2 Definition	4th April 2017	Team Wiki
Documentation	4th April 2017	SVN

Budget

The budget for this project has been divided into two parts, namely the fixed expenses and variable monthly expenses. Fixed expenses are incurred during the start of the project and it is for procuring the resources required for the successful completion of the project. The variable expenses are for the Manpower costs, mainly the salary incurred for the development team. The detailed breakdown for both these categories have been provided in the following tables

Table 4 One-Time Expense

Item	Supplier	Quantity	Unit Price (SGD)	Total (SGD)
Hardware Budget				
Development Phone	Alphabet Inc.	1	400	400

Development Laptop	Hewlett Packard Inc.	6	1200	7200
Software Budget				
App store Developer Fee	Google Inc.	6	100	100
Eclipse IDE	Eclipse Foundation	6	0	0
Visual Paradigm	Visual Paradigm International	6	0	0
Microsoft Office 365	Microsoft Corporation	6	0	0
Android Studio	Google Inc.	6	0	0
			Total	7700

Table 5 Monthly Expenses

Role	Manpower Allocation	Monthly Expenses (SGD)	Total (SGD)
Project Manager	1	4000	10000
QA Manager and Engineer	1	3800	9500
Lead Developer	1	4000	10000
Front-End Developer	1	3000	7500
Back-end Developer	1	3000	7500
Release Engineer	1	3600	9000
		Total	53500

Communication and Coordination with Sponsor

The Singapore Tourism Board grants projects funds which have the capability to improve the tourism within the Singapore. The team will coordinate with the sponsor to seek additional assistance and ensure that the project is in progress as per the schedule.

The team will regularly update the Wiki-Page for documentation and use SVN for working on the shared code base. It will be ensured that all the documents pertaining to the project and the system will be filed for review.

Team Qualification

Seshadri Madhavan is the project manager for the team He is leading extremely talented and passionate group of engineers who will make sure that the project is completed on time and as per

schedule. He is currently studying Computer Science at Nanyang Technological University in his final Semester. Madhavan is known for ensuring the demand of the project are met and has impeccable people management skill.

Sim Long Siang is the QA Manager and QA Engineer for the project. He is currently studying Computer Science at Nanyang Technological University. He has an eye for ensuring that the software has been tested as per the requirements. He possesses deep knowledge in Testing Methodology and is known to ensure highest Quality of product development. He also possesses a great sense of meticulousness and pays high attention to detail which will facilitate the Testing process.

Huang Jian Wei is the lead developer of the team. He is currently studying Computer Science at Nanyang Technological University. He has prior experience in developing Android Applications and has since been an integral member of any team. His skills in leading a team of developers is exquisite. He has a unique ability to come upto speed with new technologies and is also able to focus on the task at hand making him the perfect person for this role.

Lim Hao Zhe is the Front-End developer of the team. He is currently studying Computer Science at Nanyang Technological University. He has extensive knowledge in building UIs for Android applications and is quickly able to design and verify the validity of different UI designs. He is able to coordinate with the other developers in the team to bring the functionalities to life.

Lim Zi Yang is the Back-End developer for this project, who is currently studying Computer Science at Nanyang Technological University. He has handled back-end application development during his prior internships and also for other academic projects making him perfect for the task at hand.

Tan Jun Qiu is the Release Engineer of the team. He is also studying Computer Science at Nanyang Technological University. His analytical skills and quick thinking make him an ideal candidate for handling the release activities for the team.

Conclusion

The EXIT6 team proposes to build an application that would solve the problem of trip planning within Singapore. With features carefully chosen for this application, the team is confident that the application would benefit all the stake-holders of the project. It would benefit the users by allowing them to plan the trip instantly and export it to the calendar of their choice. It would be beneficial for the sponsor to increase the tourism activity and also help in the crowd-control in popular attractions.

References

Eurostat. (2017, 07 01). *Tourism statistics - top destinations*. Retrieved from europa.eu: http://ec.europa.eu/eurostat/statistics-explained/index.php/Tourism_statistics_-_top_destinations

Singapore Tourism Board. (2015, December 31). *Annual Report on Tourism Statistics 2015*. Retrieved from SIngapore Tourism Board Web site: https://www.stb.gov.sg/statistics-and-market-insights/marketstatistics/stb%20arts2015.pdf

SIngapore Tourism Board. (2017, January 11). *Visitor Arrival Statistics*. Retrieved from Singapore Tourism Board Web site: https://www.stb.gov.sg/statistics-and-market-insights/marketstatistics/ivastat_nov_2016%20(updated%2011jan17).pdf

Yoon, H. Y. (2010). *Yoon, Hyoseok, et al. "Smart itinerary recommendation based on user-generated GPS trajectories.* Berlin Heidelberg: Springer.

Appendix 1 – Resume

The following pages contain the resumes of all the individuals in the team.

Madhavan Seshadri

www.madhavanseshadri.com
madhavan001@e.ntu.edu.sg

EDUCATION Nanyang Technological University, Singapore

BEng. in Computer Science Aug 2013 – (expected) Jun 2017

- Cumulative GPA: 4.47/5.00
- Awarded Minor in Entrepreneurship in 2015.

PROFESSIONAL EXPERIENCE

BMW Group, Munich, Germany

Development Engineer Intern, Traffic Information Management and Route Optimization Team Jan 2016 – Jun 2016

Project: Stochastic Vehicle routing

- Optimized the stochastic routing algorithm using data caching and data-parallelism techniques improving the computation time by 20 times for routes calculated within Munich.
- Enhanced UI of internal tools by introducing dockable system of panels in JAVA Swing improving its usage productivity.
- Designed and built a web based toolkit for artificial map creation using Apache Struts 2 framework.
- Formalized the testing process for stochastic vehicle routing problem and implemented JUNIT test cases for the same.

Future Mobility Lab, Nanyang Technological University, Singapore

Undergraduate Research Aug 2014 – Dec 2015

Project: Co-operative Multi Agent Vehicle routing

- Developed a novel node pressure based multi-agent cooperative routing model achieving 30% reduction in congestion rates.
- Implemented and compared several routing and communication policies in MATLAB and SUMO (Simulation Urban Mobility).
- Implemented a distributed matrix decomposition algorithm in Hadoop and tested it on Amazon EC2.

Institute of High Performance Computing (IHPC), Agency for Science, Technology and Research (A*Star), Singapore

Intern, Distributed Computing Group May 2015 – Jul 2015

Project: E-Commerce purchase event prediction

- Developed and implemented Logistic Regression based Multi-Layer Perceptron using Theano library in python achieving 82% purchase event prediction and 54% purchase items prediction.
- Written PHP Scripts for feature extraction from the dataset optimizing the efficiency of the same.
- Formulated and implemented an ensemble based model to improve the accuracy by over 10%.

TECHNICAL SKILLS

Proficient in: Java, C++, MATLAB, SQL, Python, subversion, Apache Struts 2, LaTeX, Postgres, Amazon EC2, Apache Spring

Familiar with: C, Hadoop, JQuery, Ajax, REST APIs, JavaScript, HTML, CSS, Verilog, PHP, git, Google Guava, Python-Django

Spoken Languages: English, Hindi, Tamil
Other Languages: German (basic)

Sim Long Siang

Student at Nanyang Technological University
lsim003@ntu.edu.sg

Summary

- A positive and passionate computer science undergraduate in pursue of getting a specialization in information and cyber security. Aspires to be a computer security expert/ethical computer hacker, which focuses on security testing of organization online servers.

Age: 22
Residential Location: Chua Chu Kang, West Area
Religious Status: Free Thinker
Hobbies: Dance, Handicrafts
Email: sim9864@hotmail.com
Contact for enquiries, job offers or working opportunities

Education

Nanyang Technological University Bachelor of Engineering (B.Eng.), Computer Science, 2015 - 2019
Activities and Societies: Soul Funky(SF) Dance Club, Modern Jazz(MJ) Club

Work/Project Experience

Assistant Engineer at Singapore Technologies Kinetics(STK) March 2012 - August 2012 (6 months)
Internship under the department of Vetronics
- Analyze internal circuitry of military vehicles such as Leopard Tank
- Generate schematic drawing of internal electrical connection
- Quality checking of electrical harness

Software Engineer August 2016 – November 2016 (4 months)
Project Under Computer Science Course
- Involved in development of HDB-BTO Flat Information Application (BTO@SG)
- Generated software requirements of application
- Created test bench of application for testing control

Software Engineer August 2016 – November 2016 (4 months)
Project Under Computer Science Course
- Involved in development of Crisis Management System Application (C.R.U.X)
- Generated software requirements of application
- Documented design requirements (e.g. architecture design, software specification system (SRS))

Languages

English
Chinese (Traditional)

HUANG JIAN WEI

Student at Nanyang Technological University

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(+65)93829359

Age : 23

Residential Area: Jurong East, West Area

Summary

Highly motivated computer science undergraduate with passion in software development and product testing. Experienced in developing android application, web development and database. Knowledge of standard methodologies and the Software Development Life Cycle (SDLC). Background in Information Security.

Technical Skills

Programming Language: Java, C, C++, Perl, PHP, HTML5

Operating System: Windows XP,7/8/10, Linux, Ubuntu

Others: MySQL(Database), Eclipse IDE, Android Studio, Netbeans IDE, Laravel(Framework)

Education

Diploma in Infocomm Security Management, Singapore Polytechnic	2010-2012
Intern at DSO National Laboratory	2011-2011
Bachelor in Computer Science	2015-Current

Roles Taken Up

Software Quality Engineer, 8/2016 to 11/2016

- Plan, develop and administer software test plan to detect and diagnose errors and bugs
- Performed regression, integration, platform and performance testing to certify the stability and usability of software systems.
- Provide comprehensive software release documentation and training to support staff after compiling QA test outcome.

Lim Hao Zhe

Blk 340 Choa Chu Kang Loop #08-01 | (+65)92367465 | hlim027@e.ntu.edu.sg

Summary

An aspiring technopreneur currently pursuing a degree in computer science with a passion for software development with regards to building mobile applications. Interested in front-end and back-end application development to optimize company productivity while gaining industry experience Experienced in building Windows, Android and mobile website applications.

Education

BEng. in Computer Science | August 2015 – (expected) June 2019 | Nanyang Technological University

Diploma with Merit in Business Information Technology | April 2010 – April 2013 | Ngee Ann Polytechnic

Relavant Coursework

Programming Languages: C, C++, C#, Java, PHP, Python

Integrated Development Environment (IDEs): Microsoft Visual Studio, Eclipse IDE, Android Studio, Xamarin Studio

Spoken Languages: English, Mandarin

Other Languages: Japanese (Basic)

Experience

Technopreneurship incubation program | Apparelis.com | October 2012 - March 2013 (6 month)

Co-founder, Apparelis.com

Developed an e-commerce fashion website targeted at blogshop owners looking to sell in a dedicated marketplace

Developed a Windows mobile application which allows users to mix and match clothes from the blogshops

Amassed $3000 in funding from Entrepreneurs Connect, Ngee Ann Polytechnic (EC@NP) for best start-up idea.

Website garnered approximately 500 views per month

Software Engineer | BTO@SG | August 2016 - November 2016 (4 month)

Lead Developer, BTO@SG

Developed an Android mobile application targeted at couples looking to apply for new Build-to-Order (BTO) Flats in Singapore

Involved in designing the User Interface as well as usage of APIs to generate BTO data

Lim Zi Yang

Student at Nanyang Technological University
ZLIM050@ntu.edu.sg

Summary

Currently a computer science undergraduate pursuing his Bachelor Degree hoping to specialize in information and cyber security. Interested in using programming to provide solutions.

Age: 23
Residential Location: Serangoon North, North East Area
Contact number: 9737 5463
Email: zylim93@gmail.com

Education

Ngee Ann Polytechnic
Diploma in Information Technology, 2010 – 2013

Nanyang Technological University
Bachelor of Engineering (B.Eng.), Computer Science, 2015 - 2019

Technical Experience

Intern at Eurocopter SEA March 2012 - August 2012
-Develop VBA macros to create dashboard in Microsoft Excel

Software Engineer August 2015 – November 2016
Projects undertaken in Computer Science Course
-Assisted in developing mobile application using Android Studio
-Assisted in documentation of software projects
-Assisted in testing of application to ensure application function properly

Technical Skills

Programming language: Java, C, C++, ASP.Net, HTML5, VBA

Tan Jun Qiu

Student at Nanyang Technological University

Summary

Passionate individual equipped with business management skills as well as computer software development skills, allowing flexibility and versatility to take on dual roles when such IT and Business responsibilities intertwine.

Education

Nanyang Technological University, Singapore August 2013 – Present Bachelors (Double Degree in Business and Computer Science)

Certifications

ITIL Foundation Certificate in IT Service Management August 2016

- Basic knowledge in IT service management concepts ranging from Service strategy, Service design, Service transition, Service operation and Continual Service Improvement.

Project Management Institute February 2015(Certified Associate in Project Management)

- Basic knowledge of Project Management Skills as certified by Project Management Institute which includes but not limited to project scope, cost, time, risk and quality management.

Technical Skills

Proficient - MySQL, PHP, HTML and the Django Framework

Experience

Infocomm Development Authority of Singapore

Project Facilitator

- Assisted the Small and Medium Enterprises (SME) team to streamline the process of submitting and drafting GPAA documents related to the *iSPRINT* Program.
- Additional job roles include conducting market research on the local F&B sector and facilitating meetings with local SMEs.