Megazord Project Inception

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# 1. Project Scope

In this project, we will make a app for searching hotels near us. It will include searching capabilities on the basis of distance from the place and on budgets given by the user. It will show the rating and reviews of the hotel. The user can even check the availability of the room through the app. The app can also be used to book a hotel and accepts the information regarding the check-in date and number of nights the customer want to stay and calculates the bill of the customer. The user can even book the room through this app by providing information regarding the check-in date and number of nights they want to stay.

# 2. Estimate Tasks

The main task of the project will include basic data class for hotels and database regarding the complete hotel ratings and information. Then we will also need to apply certain searching algorithms to find the perfect hotel under our budget and near to our place that we are searching. We will also need to link the app with other third party for accepting payments for reservation of rooms.

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# 3. Estimate Schedule

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| **Project Schedule** | |
| Dates | Milestones |
| Week 0 (Jan 24 - Jan 30) | Project Definition |
| Week 1 (Jan 31 - Feb 6 ) | Creating Use Cases |
| Week 2 (Feb 7 - Feb 13) | Finalize UML and Class Definition |
| Week 3 (Feb 14 - Feb 20) |  |
| Week 4 (Feb 21 - Feb 27) | Complete Basic Search Capabilities |
| Week 5 (Feb 28 - March 6) |  |
| Week 6 (March 7- March 13) |  |
| Week 7 (March 14 - March 20) |  |
| Week 8 (March 21 - March 27) | Complete Carts, Checkouts and Ratings Functionality |
| Week 9 ( March 28 - April 3) | Final testing and Demo |

# 4. Define Risks

* Security Threats
* Personal information of user leaks
* Hacking the Database
* Hotel Data Not Updated
* Hotel Price or availability
* Hotel Address or contact information
* 5 star ratings change
* Poor Documentation
* Leads to unreadable or misunderstood code, which ultimately wastes team’s time.
* Other team members might need to recreate the poorly documented parts.
* Incorrect Use of Version Control
* Programmers might lose data if versions are not committed regularly.

# 5. Project Feasibility

This project seems to be well within our group's capabilities. We each have a reasonable coding background and individually have built a number of C++ programs. We also have technical advisors who can help us if we start to get off track. We have already implemented a free messaging service for team communication (Slack) and set up our version control repository (git hosted on Github).

We have calculated we have approximately 9 weeks before the product needs to be delivered, and have outlined preliminary milestones in the table above (Section 3).

Resource wise, we each have access to the software and hardware required to set up the project environment, but at home and at school. We each own our own computers and can freely use the lab computers at the university, so no additional funding is required for hardware. Additionally, all of the software we are using is free, and we are developing this software as free volunteers, so there are no monetary costs involved in this project.

# 6. Project Environment

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| **Project Environment** | |
| Resource Type | Product Name |
| Operating System | Debian Linux |
| Java JRE | Java SE 8 |
| GUI Framework | JavaFX or Swing |
| IDE | Eclipse |
| Version Control | Github (git) |
| Communication Platform | Slack |
| Testing Framework | JUnit 4 |

# 7. Identifying and Validating project architecture

* GUI FRAMEWORK (JAVA SWING):-

1. It provides a large number of libraries to create graphical user interface in a program.
2. It provides a set of advance controls like slider, colourpicker and table controls.

* BUSINESS LOGICS:-

1. The program will search the hotels for the customers. The order of the result will be sorted according to the availability and budget entered by the user.

* PERSISTENCE:-

1. Normally, all the transactions and personal information is managed by using third party software. Moreover, the data could only be accessed by the company.
2. However, in this program we are using text file as a database.