

# **Project Proposal**

## **Software Engineering CS-360**

Back Space

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## **1.0 Overview**

### **1.1. *Purpose, Scope and Objectives***

#### **Background**

The project serves the purpose of providing the lums community with a platform to interact among each other and also share information and ideas. We, as students, had always faced difficulties when trying to connect with our peers looking for certain information whether it be regarding academics or the social life at lums. Currently, there is no efficient way of communication between the LUMS community. The only alternative we have is LUMS Discussion Forum(LDF), a private group on Facebook where Lumintes can post anything relevant to events, courses, instructors etc. The data is not categorized in any way, therefore it is hard to navigate and relevant information is difficult to find. Furthermore, the induction process is very tedious resulting in many people not joining the platform. Moreover, LDF lacks certain features, such as a specific news feed and multiple channels. “Back Space” aims to solve all of these issues by providing a reliable and functional platform.

#### **Overview**

Back Space was created with the purpose of providing students of LUMS with a platform that would allow them to connect with their respective luminites. There already exists a platform which allows students to connect with one another but the existing platform has its limitations. Back Space is an app that will provide the best social media experience with structured and filtered information, easy to navigate and user-friendly interface.

## **Intended User Group**

The intended user for our app are the students and alumni of LUMS.

## **Value over status Quo**

- Easier to search information regarding courses and instructors.
- Displays a dedicated section for people with similar interests.
- Offers up-to-date information to students.
- All-in-one app

## **Hardware and Software**

The hardware required to access the app would consist only of mobile or tablet, it cannot be used on a desktop or laptops. The app would only be available for android users and must be downloaded from Play Store.

## **1.2. *Project description***

The goal of this project is to define a single platform where the entire community of LUMS could interact. This will save time for many students as most of them are busy with their academics and can use this app to get any information regarding courses / instructors.

\*For the following features, we have not yet decided whether we would use an existing program or write a new one.

## **Features**

- Login - Will allow users to log in to the app
- Chat System - Will allow users to send private messages to their friends.
- Give Instructor/Course Reviews - Will allow users to provide a review for a course/instructor and view reviews of an existing course/instructor available on the app.
- Add Friends - Will allow users to add other users as friends
- LUMS Map - Will allow users to view the map of LUMS
- Make Groups - Will allow users to chat in groups
- News Feed - Will allow users to view the content posted on the application
- Like/Comment on posts - Will allow users to like and comment on posts
- Find Work - Allow users to find work
- Search Box - Allow users to search in a specific tab
- Real-Time Notifications - Allow users to receive real-time notifications on their device.

### **Data Processing/Analysis**

For data processing/analysis, we will use a database to store user credentials, posts, chats, reviews and the LUMS map. On sign-up, the initial content and data will be displayed to the user. On search, the user will be displayed relevant data on the basis of keywords, such as the instructor/course name.

### **Importance**


Back Space is a much needed application with a goal to provide Luminites with an exclusive platform to connect with each other. The application will allow users to access information regarding courses and instructors, chat with their friends in groups, receive real-time notifications and much more. This will save the time of the users by offering better access to up-to-date information using multiple channels and tabs, all on one platform. Setting up the app will also be very convenient. The app will also be freely available and accessible to everyone with an android device. Due to its modular code, the application could also be used by other universities with minor changes in its functionality.


### **Customer**

Our customers are the student body and alumni of Lahore University of Management Sciences.


### 1.3. *Team profile*


**Profile card :**

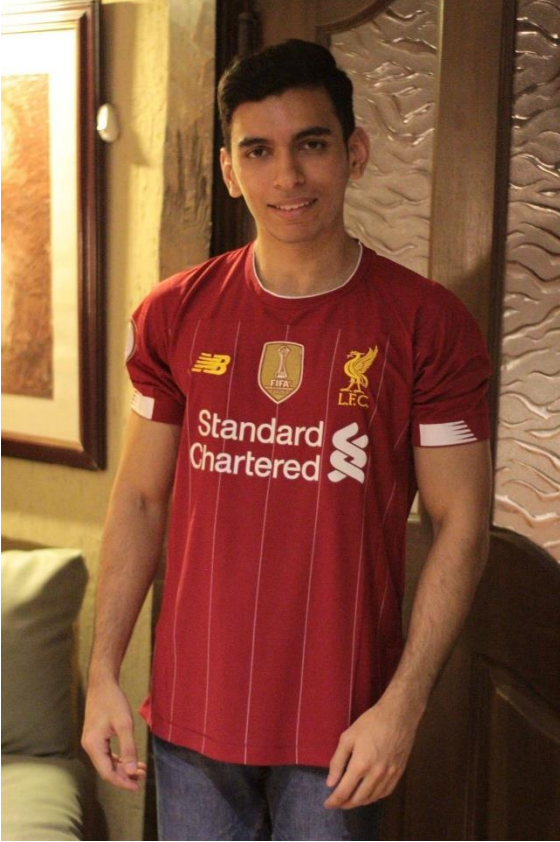
Name: Ibrahim Sanaullah	
ID: 23100204	
Email: 23100204@lums.edu.pk	
Interests and strengths: Proficient in designing UI for applications, well versed in figma. Skilled in C++ and Python.  Interested in data analysis	

Name: Aswad Tariq	
ID: 23100256	
Email: 23100256@lums.edu.pk	
Interests and strengths: 3 month experience with Laravel and backend development, minor knowledge of front end, worked for 2 months with jQuery and fluent in vanilla Javascript. Beginner level knowledge of React. Worked briefly with PHP web development.	



Name: Nashrah Shaukat	
ID: 23100333	
Email: 23100333@lums.edu.pk	
Interests and strengths: Experience in UI designing for apps and usability/product testing. Proficient in C++ and Python as well as documentation and presentation.	

Name: Zeerak Babar	
ID: 23100139	
Email: 23100204@lums.edu.pk	
Interests and strengths: Proficient in C++, python, Javascript and SQL. Have knowledge of frontend elements such as html, css. Beginner level knowledge of Laravel, React and Node js. Interested in data science.	

Name: Haseeb-Ur-Rehman Faheem	
ID: 23100044	
Email: 23100044@lums.edu.pk	
<p>Interests and strengths: Proficient in C++, Python, and Javascript, Sql. Proficient in Pytorch, Sklearn and other ML/DL frameworks. Beginner level knowledge of frontend. Minor knowledge of Illustrator.</p> <p>Interested in Machine Learning and Networking</p>	

### **1.3.1 Expertise in a specific tool**

-None

## **1.4. Assumptions and Constraints**

### **Assumptions**

- It is assumed that the intended group is familiar with the functionality and interface of a social media application such as facebook.
- The user must have an active internet connection and mobile phone to access the application.
- The users will be using the groups and channels for their intended purposes and would not engage in any sort of malicious activity.
- Since the intended users are from LUMS, the user must sign-up with a LUMS email id only.

### **Constraints**

- Due to limited time to complete this project, the app would only cater to LUMS students and will be available only on Play Store as our team does not have Mac OS.
- The team is constrained with limited expertise in software development tools.
- The performance of our application will depend on the database management system used and the latency they provide.
- The team will be relying on free APIs due to budget constraints.

## **1.5. Project Deliverables**

Deliverables include

- Software Project Proposal
- Requirement Specifications
- Design Specifications
- Development Plan
- Test plan
- Demo + source code
- Final document
- Final presentations

## **1.6. Budget Summary**

The budget calculations are done as follows:

Average gross salary of a full stack developer in Pakistan = Rs. 2,209,951/-

Average hourly rate of a full stack developer in Pakistan = Rs 1,062.48/-

Item	Hours	Budget
Project Proposal	10	10620
Proposal Presentation	8	8496
SRS Document	24	25488
Design Specifications and development plan	28	29736

Development	90	95580
QA Plan & Testing	35	37170
Final project report	25	26550
Presentations	6	6372

### **Total Budget**

The estimated budget is Rs. 230,404/- excluding the hosting charges. Hosting the app on Google Playstore will cost an additional \$25(Rs. 4,411/-). Therefore, the total estimated budget is Rs. 2,34,815/-.

## **Project Organization**

- Uzair Mustafa: Moderator of Lums Discussion Forum.
- Saad Khan: Moderator of Lums Discussion Forum.

Moderators and admins of LDF were chosen as currently that is the closest working resemblance of our application in the real world. The job of moderators is to handle what kind of posts are approved, resolve conflicts among the community and manage engagement.

## **2.0 References**

Institute, ERI Economic Research. "Full Stack Developer Salary Pakistan." *Salary Expert*, <https://www.salaryexpert.com/salary/job/full-stack-developer/pakistan>.



### 3.0 Definitions

Front-end	It is part of a website or web application through which a user can interact.
Back-end	It refers to the program's code that handles database and server-side rendering and cannot be accessed by a user.
Modular code	Program code in which its functionality can be separated into independent modules.
Deployment	One of the important steps of creating a website or an app. It means setting up the app or website live so that it could be used by others in their system.
Web Application	An application that runs on a web server through a web browser.
Malicious	It refers to the intention of causing any harm.
LDF	Lums discussion forum a platform where lums students communicate over facebook.