**Aalap – a chatting application**

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**Authors**

**Abstract**

"Aalap" is a project that presents an easy-to-use chat application that aims to make communication between users effortless. Our system strives to create a personalized and interesting chatting experience in response to the increasing need for effective and feature-rich messaging services. Real-time communication, connection, and information sharing among users promotes teamwork and a sense of connectedness. The application's user-centric design ensures accessibility and usability. Real-time messaging and a dynamic user interface are important characteristics. The development of the project is based on best practices in software engineering and system design and development principles. "Aalap" provides a platform where users may easily communicate and engage, marking a step forward in improving digital communication experiences.

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1. Introduction
   1. Background

The demand for effective and user-friendly communication tools is constantly rising in the modern digital environment. The explosion of virtual connectivity requires creative ways to improve instant messaging user experiences. In answer to this need, "Aalap" appears, aiming to offer a smooth and feature-rich chat program for users to communicate and engage.

* 1. Objectives
* **Provide a User-Friendly Interface:**

To improve the user experience during interactions, create a visually appealing and intuitive user interface for "Aalap".

* **Real-Time Messaging**:

To enable immediate communication between users, put in place a reliable real-time messaging system.

* **Scalability:**

Create a scalable application architecture so that it can accommodate future increases in the number of users without experiencing performance issues.

* **Responsive Design:**

Make sure the application works well on a range of screens and devices to encourage accessibility for a wide range of users.

* **Future Improvements:**

Establish the framework for upcoming feature additions and integrations while taking prospective updates into account to satisfy changing user requirements.

* 1. Scope

The project's scope includes every stage of "Aalap's" development, from ideation to execution. Multimedia sharing and real-time text messaging will be supported by the application. The architecture of the system will be scalable to handle future user base expansion. The project establishes the framework for upcoming improvements and integrations, even though the first release will concentrate on key features. Adherence to established security protocols to protect user data and privacy is also included in the scope.

1. System Design

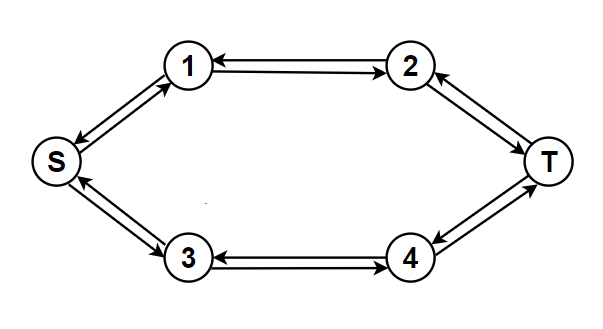
There exist lots of challenges in some of mega cities like Dhaka such as road conditions are not good enough, cycling lanes ………………………

* 1. Analysis of the system

This research aims at extending a construction pattern for our network to Dhaka, Bangladesh's capital city. The main challenges with Dhaka city are described in followings……………………….

* 1. System architecture

Green City also named as Eco-city or Sustainable city is a city designed with consideration for the social, economic, environmental impact which consists of several elements such as Green Transports. A simple network in shown in Fig. 3.1. It shows that ……………



**Figure 3.1:** Real traffic network.

* 1. Tools used

In more ways than one, driving a bicycle has a positive impact on the environment. They are also less expensive than other forms of ………………………………………

* + 1. Android Studio

Bicycles are considered zero-emission vehicles i.e. they do not release any carbon emissions. Bicycles, as vehicles with ………………………………………

* + 1. Kotlin

Bicycles are considered zero-emission vehicles i.e. they do not release any carbon emissions. Bicycles, as vehicles with ………………………………………

1. Project Implementation

This chapter implements the……………….

* 1. System implementation

At first, a selected portion of Dhaka city is considered to construct the network using Physarum inspired technique…………….

* 1. Morality or ethical issues

At first, a selected portion of Dhaka city is considered to construct the network using Physarum inspired technique. And it can also lead to better mental health and energy by bicycling 30 minutes a day [3], [4]………………………….

* 1. Socio-economic impact and sustainability

At first, a selected portion of Dhaka city is considered to construct the network using Physarum inspired technique……………....................................

* 1. Financial analyses and budget

At first, a selected portion of Dhaka city is considered to construct the network using Physarum inspired technique……………………….

1. Conclusion

A modified Physarum-inspired model is presented in this project to address the design of the bicycle lane network…………………………………….

* 1. Conclusion and challenges faced

The network design technology inspired by Physarum is believed to have balanced costs, effectiveness, and resilience. Inside Dhaka city, an unorganized and unplanned city, we have developed an electric bicycle ……………………

* 1. Future Study

# In the future, parallel computing and the optimal model for the design of the transport network are part of our work. Furthermore, our research includes the implementation of the Physarum ……………………….

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**N.B.** This is the preferable format for Report writing. The subsections written in italic forms (i.e., 1.4, 1.5, 4.2, 4.3, 4.4) are fixed. However, the Supervisor can extend the sections/points of the report (if necessary).