**Software Engineering Project**

**Phase II: User Requirements and Application Specifications**

***Group Members: Favio Kushta, Livia Kadisi, Eriselda Deda, Arjola Sinaj, Viktoria Peshku***

**Reasons why we chose an app for Bus Reservation at Epoka University:**

**Convenience:** Many university students rely on public transportation to get around campus and the surrounding area. An app that allows students to easily reserve a spot on a bus could make their lives more convenient and save them time.

**Cost-effective:** University students are often on a tight budget and may not be able to afford a car or other expensive modes of transportation. A bus reservation app would allow students to save money on transportation costs.

**Improved efficiency:** By using a bus reservation app, bus companies could better manage their schedules and routes. This would result in more efficient transportation and less time spent waiting for a bus.

**Environmental benefits:** By encouraging students to use public transportation, we could help reduce carbon emissions and promote a more sustainable mode of transportation.

**User Requirements:**

* The app should allow students to reserve seats on university buses.
* The app should display a list of available buses, routes, and seat availability.
* The app should provide updates on bus location and arrival time.
* The app should allow students to cancel their reservations if needed.
* The app should be user-friendly and easy to navigate.

**Application Specifications:**

* The app should be compatible with both iOS and Android operating systems.
* The app should include a database to store user information and reservation details.
* The app should include a payment system for seat reservations.
* The app should be secure and protect user data.

**Requirements Gathering Phase**

* Conduct interviews and surveys with university students to understand their needs and preferences for a bus reservation app.
* Identify the features that the app should have, such as seat reservation, bus schedules, real-time updates on bus location, and payment options.
* Define the target audience and user personas.

**Development Model**

We chose the waterfall model. The reasons are as follows:

**Clear project requirements:** The Waterfall Model works best when the project requirements are clearly defined and well-understood. In our case, we have a well-defined scope of work - creating a bus reservation app for our university. This means that we can develop a detailed plan for the project that aligns with our user requirements and application specifications.

**Sequential development:** The Waterfall Model follows a sequential development process, which means that each phase of the project is completed before moving on to the next one. This ensures that each phase is thoroughly completed and validated before moving on to the next phase. In our case, we can first gather user requirements, analyze them, design the app, develop it, test it, and finally deploy it.

**Documentation:** The Waterfall Model requires documentation at each stage of the project. This means that we can ensure that there is a clear understanding of the project requirements, design, and development process at all times. This can help avoid misunderstandings and ensure that everyone involved in the project is on the same page.

**Risk management:** The Waterfall Model includes a risk management plan in the early stages of the project. This means that we can identify potential risks and take steps to mitigate them before they become bigger problems. In our case, we can identify potential technical risks and user feedback risks and take steps to mitigate them.

**Well-established framework:** The Waterfall Model is a well-established framework that has been used in software development for many years. This means that there are established best practices and guidelines that we can follow to ensure that our project is completed successfully.