

**BAHIR DAR UNIVERSITY**

**Faculity of computer engineering**

**Intermediate programming course**

**Group assignment**

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**Instructor :-**

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**Date :-**

**Business Requirement Analysis (BRA):**

1. **Identify Stakeholders**: The stakeholders for the bus ticket reservation system might include:

* Transportation companies
* Customers
* Sales agents
* Accounting department
* IT department

2. **Determine Business Objectives**: The objectives for a Bus ticket reservation system might include:

* + Streamlining the ticket booking process
  + Increasing revenue
  + Improving customer satisfaction
  + Reducing manual work and time

3. **Analyze Current Processes**: The current manual ticket booking process should be analyzed to identify inefficiencies and areas for improvement.

4. **Define Scope**: The scope of the system should be defined, which includes identifying the features to be included.

5. **Gather Requirements**: Requirements can include functional requirements (what the system should do), non-functional requirements (qualities that the system should have), and constraints (limitations on the system's capabilities).

6. **Analyze and Prioritize Requirements**: Analyze the requirements and prioritize them based on stakeholder inputs and how they align with business objectives.

7. **Create BRA Documents**: Create the BRA documents that capture the results of the analysis performed. These documents can include stakeholder requirements, system features, constraints, and project scope.

**Software Requirement Document (SRD)**:

1. **System Overview**: This section provides an overview of the system and its objectives. It should outline the purpose of the software, its benefits, and any limitations.

2. **Functional Requirements**: The functional requirements of the bus ticket reservation system include:

* + registration
  + creating new account

The user must give the following information

: first name ,last name, phone number, address, passwords.

As an output new account is created and receives OTP or verification number to mobile number.

USERS can assess like;

∞ search for busses

∞ seat selection

∞ payment gateway

∞ cancel tickets

ADMINS

∞ edit router

∞ update location of bus

∞ cancellation of bus

- Online booking system for seats on different buses on different routes

- A user registration system to create and maintain user accounts

- A detailed bus schedule with the availability of the tickets for a particular journey

- Multiple payment options, including online payment or cash-on-delivery

- A search engine for finding the destination and time of journey

3. **Non-Functional Requirements**: The non-functional requirements of the system include:

* + The system should operate 24\/7 with minimal downtime
  + The system should be user-friendly and easy to navigate with intuitive UI
  + The system should support multiple languages to accommodate users from different regions
  + The system should be secure and protect user data with encryption and other security measures
  + correctness requirement
  + portability requirement
  + efficiency requirement
  + usability requirement and reusability requirement
  + reliability requirement
  + maintainability requirement

4. **User Interface Requirements**: The user interface should be designed keeping in mind the user experience and should be intuitive and responsive.

∞ user interface

∞ hardware interface

∞ software interface

∞ communication interface

5. **Data Requirements**: The data requirements include:

* + Storing user account information like name, contact details, and payment methods
  + Maintaining user booking history
  + Storing information about available buses, routes, and fare prices

6. **Testing Requirements:** The testing requirements will include various types of testing, such as unit testing, integration testing, and acceptance testing.

7. **System Architecture**: The system architecture will include the software components, system design principles, and interfaces to be used.

8. **Acceptance Criteria**: Define the acceptance criteria for the project, including the conditions required to accept the software.

Sign-off: This section should contain the sign-off from all stakeholders of the system, confirming that the SRD aligns with the BRA and that they are satisfied with the requirements for the project.

**CONCLUSION**

This facility is helpful for the users and the organization as well. This is a simple yet effective technology which helps the users to access the service concurrently from different places. This project designed to meet requirements of a bus reservation system. It has been developed in XHTML, PHP, CSS, JAVASCRIPT and database has been built in MySQL. By using this application, the company can provide reservation services and information to their customers without the limitation of office hours or manpower. Not only does it let customers book trips around the clock from any location with an internet connection but it is also designed for use by the company to internally manage their business processes; minimizing human errors and overcoming difficulties and problems that arose in the previous system.