SRS Document

**Team 117** | **Bus trip reservation system** | **TA: Shamia Magdy**

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Group Members and sections:

| Section | ID (Seat Number) | Name in Arabic |
| --- | --- | --- |
| Sec 7 CS | 20201700691 | محمد سامي عبد الكريم أحمد |
| Extra1(new), Sec 10(old) CS | 20201701249 | يوسف عبدالحميد فرج عبدالحميد |
| Sec 6 CS | 20201700605 | كريم حسين عبده جويلي |
| Sec 3 CS | 20201700243 | دعاء يحيي اسماعيل حسن |
| Sec 2 Csys | 20201700278 | روان علاء الدين حسان |
| Sec 4 Csys | 20201700219 | حبيبه عمرو محمد محمد |
| Csys Sec 5 - No Department | 20201700430 | عبدالرحمن اشرف فتحي حسن |
| Sec 8 CS | 20201700888 | مينا اشرف ميخائيل صالح |

1. Introduction

A is a desktop application bus trip reservation system that allows customers to book bus trips. The system aims to streamline the booking process, reduce waiting times, and provide customers with an easy-to-use platform to make reservations.

2. User Requirements

* Easy Booking Process: Users shall be able to easily book bus trips through the system. The booking process shall be straightforward and intuitive, with clear instructions and prompts.
* Secure Payments: The system should have multiple secure payment options such as debit/credit cards, online banking, etc.
* Seat availability: The system should display the available seats on the bus so that the user can select the seat of their liking.
* Cancellation and refund policy: The system should provide a clear and easy cancellation policy for users who wish to cancel their reservation.
* Availability of Bus Trips: Users shall be able to view the availability of bus trips in real-time. The system shall display accurate and up-to-date information about bus schedules and availability.
* Confirmation and Tickets: Users shall receive confirmation of their reservation and tickets for their booked bus trip. The system shall generate tickets that can be printed or stored electronically.

3. Functional Requirements

3.1 Registration and Login:

* + Description/Action: Allows customers to create accounts and login to the system.
  + Requirements/Inputs: Personal information such as name, email address, contact details, and password.
  + Source: Customer.
  + Pre-condition: None.
  + Post-condition: Customer account is created, and customer is logged in to the system.
  + Output: Confirmation message and user dashboard.

3.2 Bus Trips:

* Description/Action: Provides customers with a list of available bus trips.
* Requirements/Inputs: Search criteria such as date, time, departure, and arrival locations.
* Source: Customer.
* Pre-condition: Customer is logged in.
* Post-condition: List of available bus trips is displayed.
* Output: List of available bus trips.

3.3 Reservation:

* Description/Action: Allows customers to reserve seats on a bus trip.
* Requirements/Inputs: Personal information , Trip-ID, and Seat No.
* Source: Customer.
* Pre-condition: Customers must be logged in and have selected a bus trip with available seats.
* Post-condition: Reservation is confirmed, and a customer has issued a ticket.
* Output: Confirmation message and ticket.

3.4 Payment:

* Description/Action: Allows customers to make payments for their reservations.
* Requirements/Inputs: Payment information such as credit card details or net banking information.
* Source: Customer.
* Pre-condition: Customer must have a valid reservation and enough credits in his account.
* Post-condition: Payment is processed, and a customer has issued a payment confirmation.
* Output: Payment confirmation.

3.5 Cancellation and Refund:

* Description/Action: Allows customers to cancel their reservations and receive refunds.
* Requirements/Inputs: Reservation details such as reservation number and reason for cancellation.
* Source: Customer.
* Pre-condition: Customer must have a valid reservation.
* Post-condition: Reservation is canceled, and refund is processed according to the system's cancellation policy.
* Output: Confirmation message and refund details.

3.6 Manage Refunds:

* Description/Action: Allows Admin to process refunds for users.
* Requirements/Inputs: Admin credentials, Customer refund request
* Source: System Admin, Customer.
* Pre-condition: Logged in as Admin.
* Post-condition: Customer refund request marked as accepted or rejected.
* Output: Confirmation message of refund status.

4. Non-Functional Requirements

4.1 Usability: The system shall be user-friendly and intuitive, with clear instructions and prompts for customers to follow. The system shall have a responsive design that adapts to different screen sizes and devices.

3.2 Performance: The system shall be able to handle a large number of concurrent users and transactions without experiencing any performance issues. The system shall have a fast response time, with minimal waiting times for customers.

3.3 Security: The system shall use secure protocols to protect customer data and transactions. The system shall encrypt sensitive information, such as credit card details, to prevent unauthorized access.

3.4 Compatibility: The system shall be compatible with different web browsers and devices, including desktops, laptops, tablets, and smartphones. The system shall be accessible to customers with disabilities, such as visual impairments and hearing impairments

3.5 Reliability: The system shall have backup and recovery mechanisms in place to prevent data loss and ensure system continuity in case of failure, The system shall also have automated monitoring and alerting systems to notify the admin of any issues and to proactively address them.