Final Exam

Bangladesh Bus Ticket Booking System

OOP with Python

(100 Marks)

Part	Requirement	Details	Marks
1	**Bus Class**	- Attributes: `number`, `route`, `total_seats`, `booked_seats = 0` - Method `available_seats()` returns unbooked seats - Method `book_seat()` books if seats available	20
2	**Passenger Class**	- Attributes: `name`, `phone`, `bus` (reference to a `Bus` object)	15
3	**BusSystem Class**	- Manages all buses and bookings - Attributes: `buses` list, `passengers` list	5
4	**Admin Class**	- Class `Admin` with attributes: `username`, `password` - Method: `login()` to validate credentials	5
5	**Add Bus Method**	- Method: `add_bus(number, route, seats)` - Adds new `Bus` to system (Only admin can do this)	10
6	**Book Ticket Method**	- Method: `book_ticket(bus_number, name, phone)` - Finds bus, checks seat availability, books ticket, adds `Passenger`	15
7	**View Buses Method**	- Method: `show_buses()` - Displays each bus with available seats	5
8	**Admin Login (Feature)**	- Simple login system using `Admin` class Username = `"admin"` Password = `"1234"` - Only after login, admin can access the Admin Menu	10
9	**User Menu (for everyone)**	Menu options for all users: 1. Admin Login 2. Book Ticket 3. View Buses 4. Exit	5
10	**Admin Menu (after successful login)**	Admin-only options after login: 1. Add Bus 2. View All Buses 3. Logout	5
11	**Fixed Fare System**	- Each ticket must show a fixed fare of ৳500	5

12	Input Validation & User Feedback	- Handle invalid choices and show clear prompts and messages	5
Total Marks:			100

Things To Submit:

- Keep full code in one Google Doc and make it public.
- Submit the public link.