

Scenario

Booking System

General System Requirements

The system will have a back-end database (DB) that will engine two independent front-end platforms, a web-based application (WebDev) and a desktop application with GUI implementation (GUI).

You are required to design and implement the whole system, including the database and both of the platforms that will manipulate the data in it. As the system will be used by a number of different people, different user account types must be created. Depending on the account type, different options in the system will be available to them. The three types of accounts will be:

Customers

Customers should be able to register themselves with their full name, mobile number, email, address, and password. After successful registration, a customer should be able to log into the system and search for a provider; this could be filtering by name and/or location of the service. Also, customers would book themselves for an appointment, once they have selected a suitable provider.

Service providers

Service providers should register themselves by giving their full name, location, mobile number, and password. After successful registration, the service provider is able to log into the system and they can enter their free available slots, which will be updated and available for the customer to see. Also, there should be an option to confirm the booking that the customer has made.

Administrator

The system administrator does not have to register itself and should be pre registered through the back-end database. Once logged in, the administrator will be redirected to the administration panel/manager where he/she can view all the current bookings made by the customers. When a provider registers themselves, their verification will be on "Pending" until the administrator approves them, subject to verification that the provider appears to be a genuine service provider. The administrator should also be able to cancel an appointment,

delete any account (provider and customers), and handle complaints from the customers regarding any services given by the provider

System requirements

There should be a unique login section for customers, provider and administrator to access the system. When a user opens the website or desktop application, they should be greeted with two main options:

- Register on the system for a new account
- Login to the system with an existing account
- All users should be validated against data stored in the database. Customers, service providers and administrator should be then directed to their appropriate home page if the login is successful.
- Storing passwords in plain text is a security issue that should be avoided. When customers and providers register for a new account, the password that they enter should be hashed and salted.
- All input fields should be validated using client-side validation, checking for length and blank values, and any extra condition as needed.
- All passwords must have a minimum of 8 characters and a maximum of 12. They must include at least one uppercase alpha character, one special character and one number.

Customer specifications

Customers who are going to be registering themselves must enter their:

- Full name.
 - Phone number.
 - Email address.
 - Password.
1. Customers who are already registered would use their email and password to login.
 2. When a customer logs into the system, they should be presented with these main options on their home page.
 3. Search provider: by name or location to book an appointment. Once they have found and selected a particular provider, they can check available free slots.
 4. View their own bookings: they should be able to cancel a booking if they wanted.
 5. Place a complaint about a service provider.
 6. Logout option from the system.

Service Provider Specifications

Providers who are going to be registering themselves must enter their:

- Full name.
 - Phone number.
 - Email address.
 - Location.
 - Password.
1. They must be notified that their registration is subject to the approval of the administrator.
 2. Providers who are already registered would use their email and password to login.
 3. When a provider logs into the system, they should be presented with these main options on their home page.
 4. View a list of upcoming appointments: they should have an option to let the customer know that the booking has been received and confirmed.
 5. Set availability: set specific slots as available or not available.
 6. Set status of the appointment: if it has been completed or if it is cancelled.
 7. Logout option from the system.

Administrator Specifications

An admin account should be created separately. Admin credentials are:

- **email:** admin@admin.admin
 - **password:** admin
1. As the administrator should be already registered, they would use their email and password to login.
 2. When an administrator logs into the system, they should be presented with these main options on their home page.
 3. View the activities performed by the providers and customers.
 4. Verify a service provider: when any provider register themselves.
 5. Logout option from the system

Additional requirements

- The administrator manager should allow to create and delete another administrator account.
- The system should be enhanced to ensure customers and providers cannot register more than once.
- After the service has been done, the customer can also leave reviews on the system, and accordingly be viewed by the service provider.