IT 313 Software Engineering

Hospital Management System

Unit testing

Group: 15

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Unit testing using mocha and chai:

Mocha is a widely used JavaScript test framework running on NodeJS and browsers. Chai is an assertion library that is used chiefly alongside Mocha.

1. Login

```
PS C:\Users\Vaidik's PC\Desktop\hms testing\github_RegistrationForm> npm run test

> registrationform@1.0.0 test
> mocha



  POST /login
    ✓ should return a 400 status and alert for invalid login details (313ms)
    ✓ should successfully log in and redirect to admin home for an admin user (389ms)
    ✓ should successfully log in and redirect to doctor home for a doctor user (271ms)
    ✓ should successfully log in and redirect to receptionist base for a receptionist user (257ms)
    ✓ should successfully log in and redirect to patient home for a patient user (272ms)


  5 passing (2s)
```

Test cases:
1. If the inserted password is wrong, it shows an alert and the user won't be able to log in.
2. The system checks the database. If the user is saved as an admin, it will redirect to the admin home page.
3. The system checks the database. If the user is saved as a doctor, it will redirect to the doctor home page.
4. The system checks the database. If the user is saved as a receptionist, it will redirect to the receptionist home page.
5. The system checks the database. If the user is saved as a patient, it will redirect to the patient home page.

2. Appointment booking

```
PS C:\Users\Vaidik's PC\Desktop\hms testing\github_RegistrationForm> npm run test

> registrationform@1.0.0 test
> mocha


  POST /showslots
    ✓ should return available slots for a valid request (84ms)
    ✓ should return an alert for no available slots


  2 passing (126ms)
```

Test cases:
1. If slots are available for the selected doctor, the patient will be able to book an appointment.
2. If slots are not available, it will show an alert for no available slots.

3. Search the patient profile

```
PS C:\Users\Vaidik's PC\Desktop\hms testing\github_RegistrationForm> npm run test

> registrationform@1.0.0 test
> mocha


  POST /showslots
    ✓ should render the patient profile for a valid ID (79ms)
    ✓ should return an alert for an invalid or not found ID


  2 passing (143ms)
```

Test case:
1. If the user inserts a valid patient ID, the patient's profile will be shown.
2. If the inserted ID is wrong, an alert will be shown for an invalid ID.

4. Apply for leave

```
PS C:\Users\Vaidik's PC\Desktop\hms testing\github_RegistrationForm> npm run test

> registrationform@1.0.0 test
> mocha



  POST /receptionist_leave
    ✓ should apply for leave successfully with valid dates (94ms)
    ✓ should return an alert for invalid dates


  2 passing (138ms)
```

Test case:
1. If the dates are valid then the leave application will be successfully applied.
2. If the leave end date comes before the leave beginning date an alert message will be shown for the invalid dates.