

MINI PROJECT REPORT

BACHELOR OF ENGINEERING (COMPUTER ENGINEERING)

SUBMITTED BY

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**DEPARTMENT OF COMPUTER ENGINEERING
P.E.S MODERN COLLEGE OF ENGINEERING
PUNE - 411005.
SAVITRIBAI PHULE PUNE UNIVERSITY
[2021 - 22]**



Progressive Education Society's Modern College of Engineering
Department of Computer Engineering Shivajinagar, Pune -
411005.

CERTIFICATE

This is to certify that the following students of Final Year Computer Engineering of PES's, Modern College of Engineering have successfully completed the Laboratory Practice II (Mini Project) under the guidance of Mr. Anand Deshmukh.

The Group Members are :

Shantanu Mangle	41242
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This is in partial fulfillment of the award of the degree Bachelor of Computer Engineering of Savitribai Phule Pune University.

Date:

Internal Guide
Mr. Anand Deshmukh

(Prof. Dr. Mrs. S. A. Itkar)
Head Department of Computer Engineering

External
Examiner

Title:

Create a small web-based application by selecting relevant system environment/platform and programming languages. Narrate concise Test Plan consisting features to be tested and bug taxonomy. Narrate scripts in order to perform regression tests. Identify the bugs using Selenium WebDriver and IDE and generate test reports encompassing exploratory testing.

Problem Definition:

Perform Web testing and identify the bugs using Selenium WebDriver and IDE and generate test reports encompassing exploratory testing.

Objective:

Perform testing on a web application and write test cases.

Prerequisite:

Knowledge of Core Java

Software Requirements:

Selenium web driver,

Selenium IDE,

Google Chrome

Outcome:

You are able to Web Testing using Automation Tool like Selenium Web driver and IDE

Theory:

Selenium:

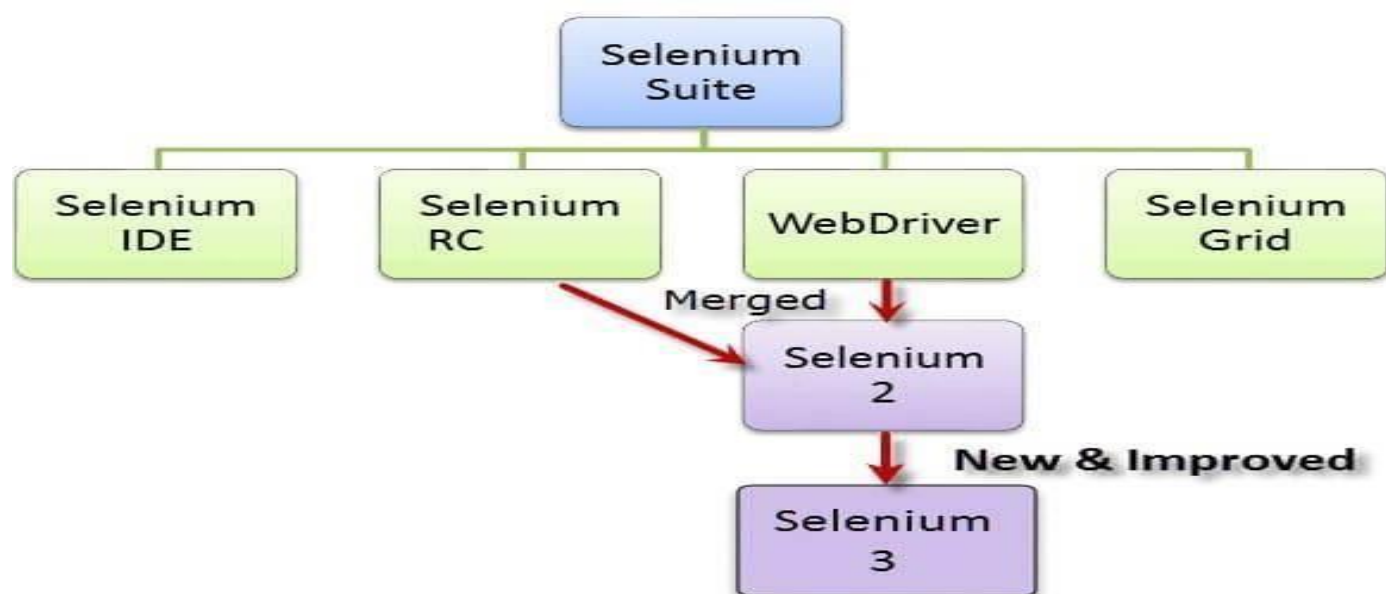
Selenium is a free (open source) automated testing suite for web applications across different browsers and platforms. Selenium is a suite of software tools to automate Web Browsers. It is an Open source suite of tools mainly used for Functional and Regression Test Automation. Selenium is a free (open source) automated testing suite for web applications across different browsers and platforms. It is quite similar to HP Quick Test Pro (QTP now UFT) only that Selenium focuses on automating web-based applications. Testing done using a Selenium tool is usually referred as Selenium Testing.

Selenium Tools Suite:

Selenium is not just a single tool but a suite of software's, each catering to different testing needs of an organization.

It has four components

1. Selenium Integrated Development Environment (IDE)
2. Selenium Remote Control(RC)
3. WebDriver
4. Selenium Grid



Selenium IDE:

Selenium IDE (Integrated Development Environment) is primarily a record/run tool that a test case developer uses to develop Selenium Test cases. Selenium IDE is an easy to use tool from the Selenium Test Suite and can even be used by someone new to developing automated test cases for their web applications. One does not require any special setup to get started with Selenium IDE. You just need to add the extension of your specific browser. Selenium IDE provides you with a GUI (Graphical User Interface) for easily recording your interactions with the website. Selenium IDE allows a user or a test case developer to create the test cases and test suites and edit it later as per their requirements. The development environment also provides the capability of converting test cases to different programming languages, which makes it easier for the user and does not mandate the need for knowing a specific programming language.

Advantages of Selenium:

1. It is an Open-source Software.
2. It supports various Operating environments (Windows, Linux, Mac, etc.)
3. It supports various browsers (IE, Mozilla Firefox, Chrome, safari, Opera etc....)
4. It supports various programming environments (Java, Perl, Python, Ruby, and PHP)
5. It supports parallel Test execution.
6. It uses less Hardware resources.

Disadvantages of Selenium:

- i) It supports Web based Applications only.
- ii) No reliable support from anybody.
- iii) No centralized maintenance of Elements/objects
- iv) Difficult to setup environment.
- v) Difficult to use.
- vi) Limited support for Image based testing.
- vii) New features may not work properly.
- viii) No other tool integration for test management & No built in Reporting facility.

Application Description:

Tools used in construction of web application:

1. Html
2. Mysql
3. PHP
4. Java Script
5. CSS

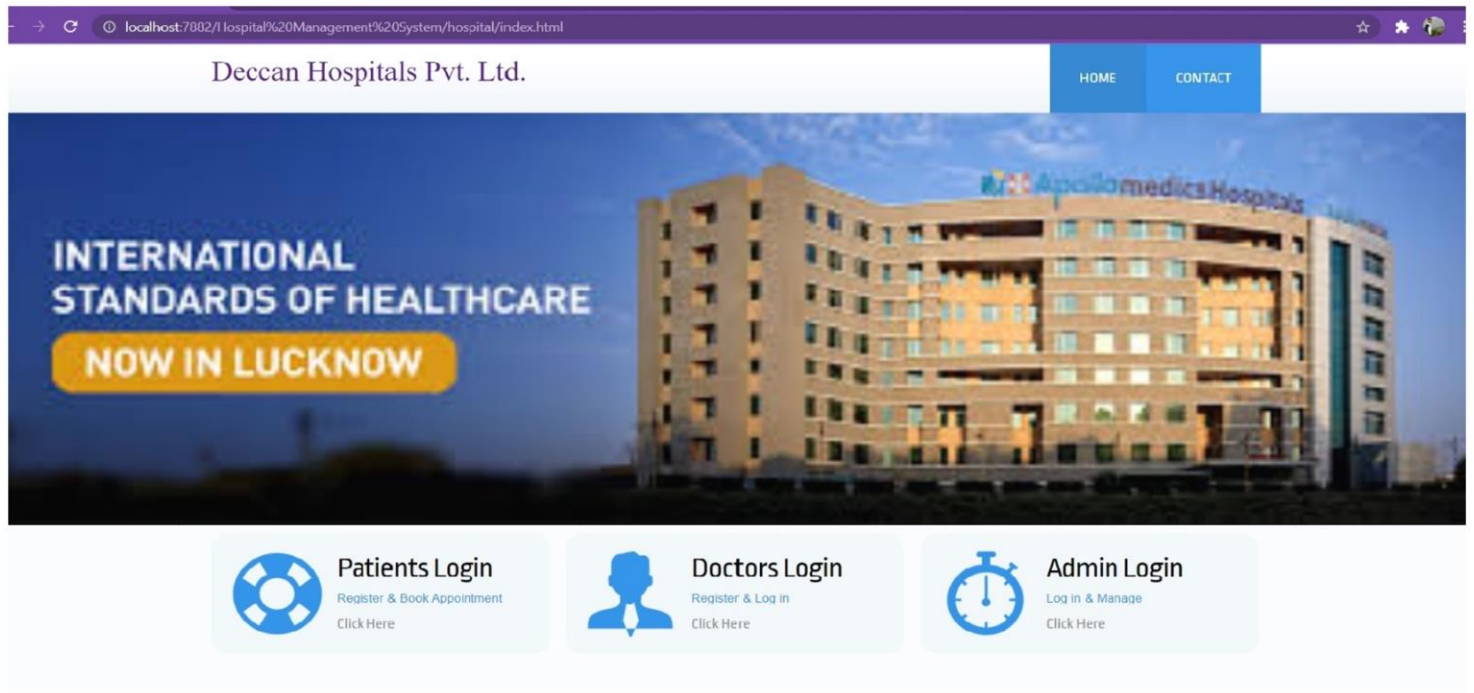
Our application name is Hospital Management System. The application can be used by hospital to manage their working.

Application has Three login profiles:

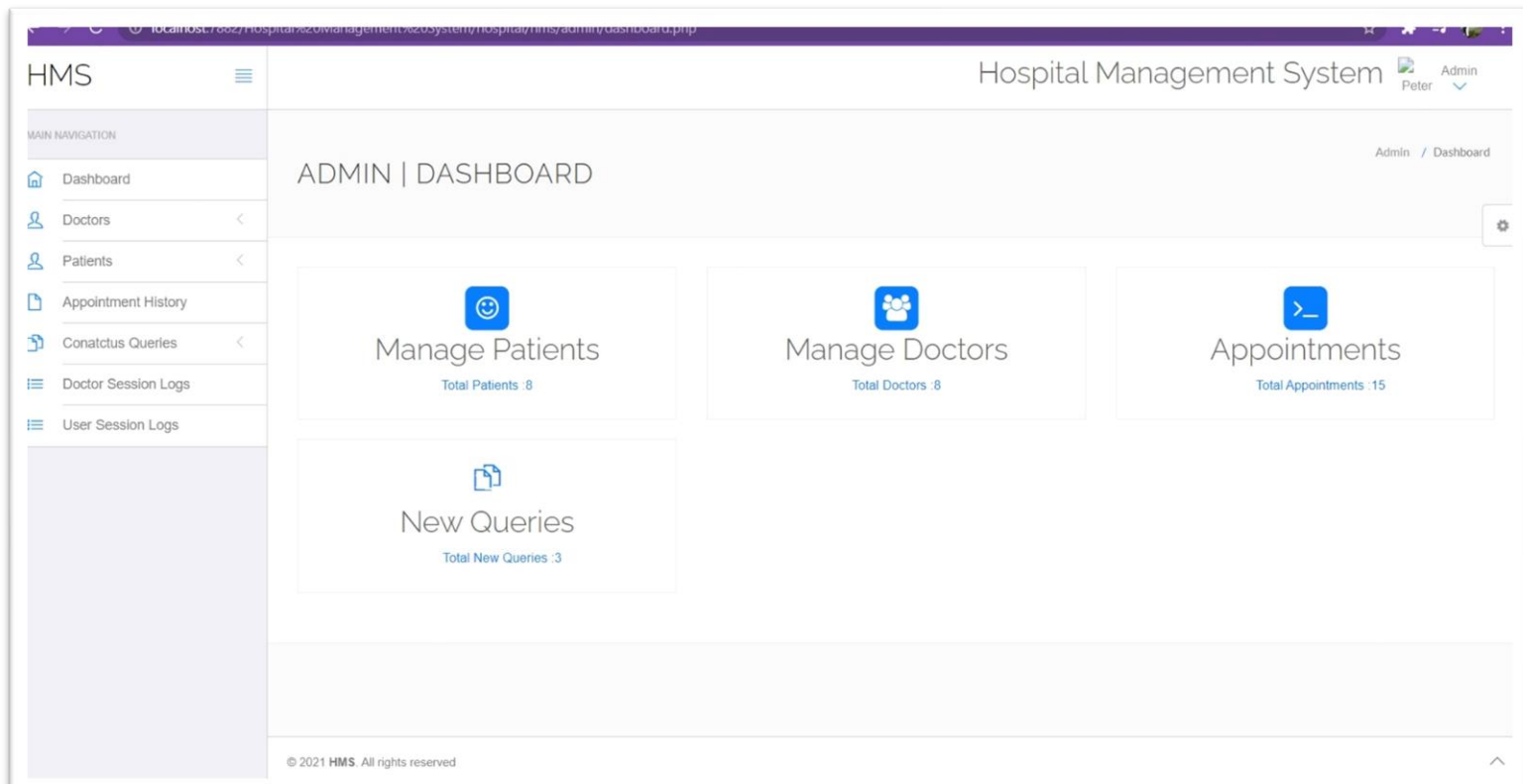
1. Admin login
In admin dashboard hospital management can control all working of hospital. They have options of patient management, doctor management, appointments management, queries resolution
2. Patient login:
Patient dashboard can be used by customer to manage their profile. Patient can see their booked appointments or can book new appointments.
3. Doctor login:
In doctor dashboard doctor can manage their Profile. Doctors can also manage their appointments through doctor dashboard.

Sample Screenshots of Application:

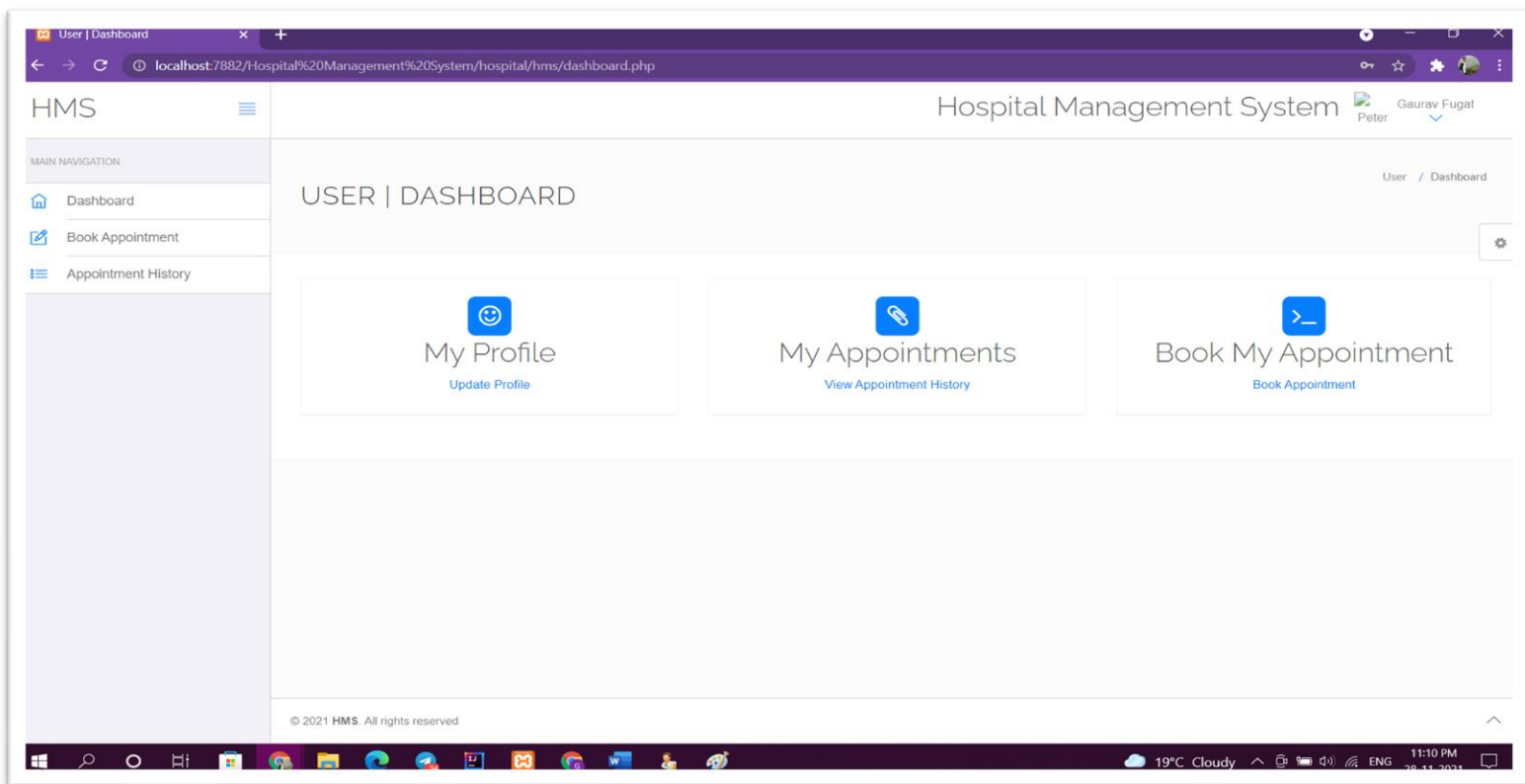
1. Dashboard:



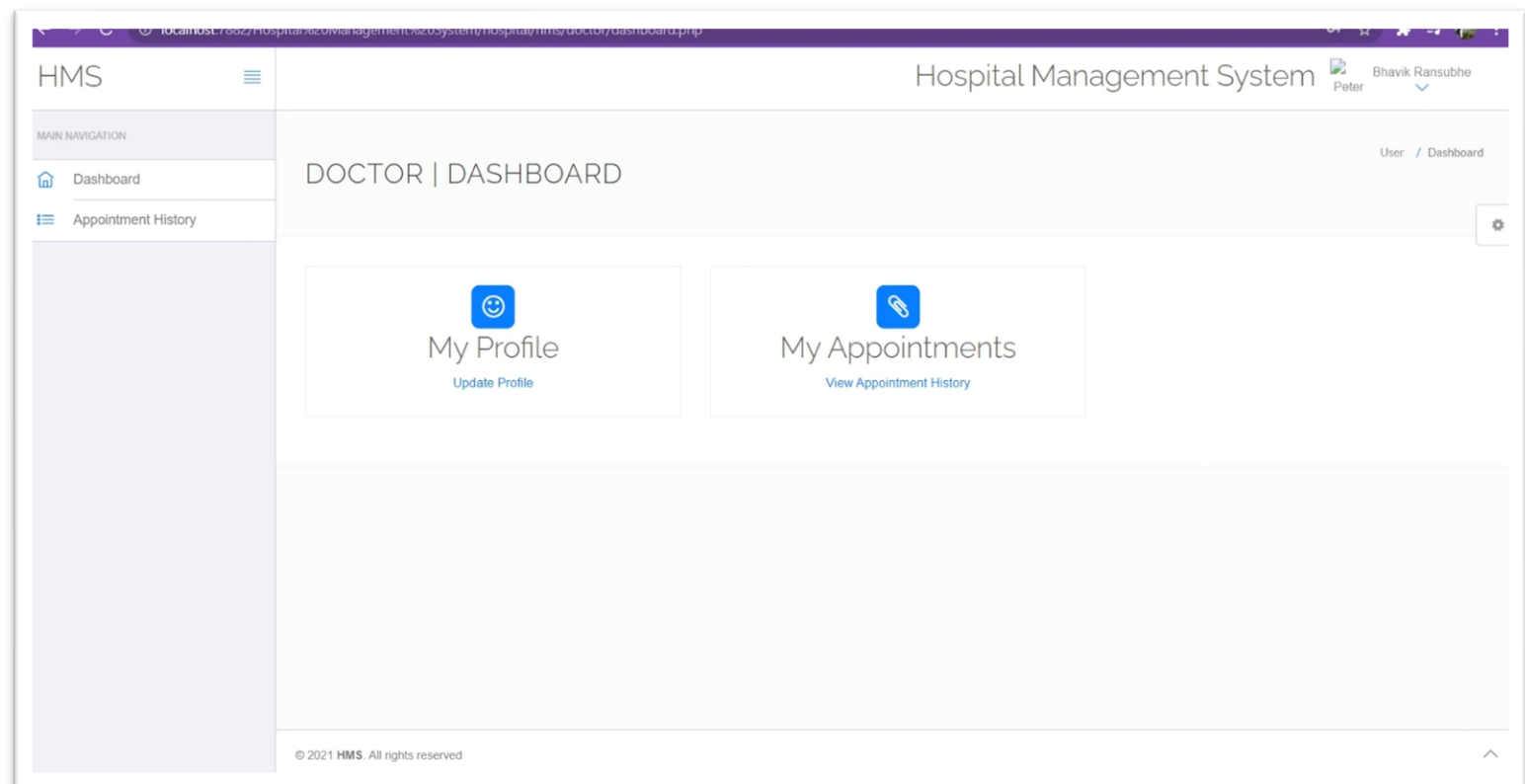
2. Admin Dashboard:



3. Patient Dashboard:



4. Doctor Dashboard:



1. Admin login:

52.30 s

Collapse | Expand

HMS		52.30 s
AdminLogin		52.30 s
AdminLogin.TC_WB_AL1_correctlogin	passed	17.48 s
AdminLogin.TC_WB_AL2_firstwronglogin	passed	8.62 s
AdminLogin.TC_WB_AL3_secondwronglogin	passed	6.52 s
AdminLogin.TC_WB_AL4_thirdwronglogin	passed	6.48 s

Generated by IntelliJ IDEA on 29/11/21, 9:35 AM

2. Admin Sidebar:

1 m 13 s

Collapse | Expand

HMS		1 m 13 s
AdminSidebarMenu		1 m 13 s
AdminSidebarMenu.TC_WB_AS1_sidebar1	passed	16.95 s
AdminSidebarMenu.TC_WB_AS2_sidebar2	passed	14.26 s
AdminSidebarMenu.TC_WB_AS3_sidebar3	passed	14.15 s
AdminSidebarMenu.TC_WB_AS4_sidebar4	passed	14.36 s

Generated by IntelliJ IDEA on 29/11/21, 11:27 AM

3. Patient sidebar menu:

The screenshot shows the IntelliJ IDEA IDE with a web browser window open. The browser displays the test results for the 'PatientSidebarMenu' test suite. The results show that all 5 tests passed. The test suites listed are:

- HMS**: 54.48 s
- PatientSidebarMenu**: 54.48 s
 - PatientSidebarMenu.TC_WB_SM1_dashboard**: passed, 17.03 s
 - PatientSidebarMenu.TC_WB_SM2_bookappointment**: passed, 16.32 s
 - PatientSidebarMenu.TC_WB_SM3_bookmyappointment**: passed, 13.07 s

The IDE interface includes a sidebar with project files, a bottom status bar showing the current time (12:21 PM) and temperature (25°C Sunny), and a window title bar with the file path 'C:\Users\Gaurav\Downloads\HMS\Test\%20results\Test\%20Results\%20-%20PatientSidebarMenu.html'.

4. Book appointment:

BookAppointment: 3 total, 3 passed		32.55 s
Collapse Expand		
<pre>driver\4.0.0\selenium-remote-driver-4.0.0.jar;C:\Users\Gaurav Fugati.m2\repository\io\netty\netty-buffer\4.1.68.Final\netty-buffer-4.1.68.Final.jar;C:\Users\Gaurav Fugati.m2\repository\io\netty\netty-codec-handler\4.1.67.Final\netty-codec-http-4.1.67.Final.jar;C:\Users\Gaurav Fugati.m2\repository\io\netty\netty-codec\4.1.67.Final\netty-codec-4.1.67.Final.jar;C:\Users\Gaurav Fugati.m2\repository\io\netty\netty-handler\4.1.67.Final\netty-handler-4.1.67.Final.jar;C:\Users\Gaurav Fugati.m2\repository\io\netty\netty-common\4.1.68.Final\netty-common-4.1.68.Final.jar;C:\Users\Gaurav Fugati.m2\repository\io\netty\netty-transport-native-epoll\4.1.67.Final\netty-transport-native-epoll-4.1.67.Final.jar;C:\Users\Gaurav Fugati.m2\repository\io\netty\netty-transport-native-kqueue\4.1.67.Final\netty-transport-native-kqueue-4.1.67.Final.jar;C:\Users\Gaurav Fugati.m2\repository\io\netty\netty-transport-native-unix-common\4.1.67.Final\netty-transport-native-unix-common-4.1.67.Final.jar;C:\Users\Gaurav Fugati.m2\repository\io\netty\netty-transport\4.1.68.Final\netty-transport-4.1.68.Final.jar;C:\Users\Gaurav Fugati.m2\repository\io\netty\netty-resolver\4.1.68.Final\netty-resolver-4.1.68.Final.jar;C:\Users\Gaurav Fugati.m2\repository\io\opentelemetry\opentelemetry-api\1.6.0\opentelemetry-api-1.6.0.jar;C:\Users\Gaurav Fugati.m2\repository\io\opentelemetry\opentelemetry-context\1.6.0\opentelemetry-context-1.6.0.jar;C:\Users\Gaurav Fugati.m2\repository\io\opentelemetry\opentelemetry-exporter-logging\1.6.0\opentelemetry-exporter-logging-1.6.0.jar;C:\Users\Gaurav Fugati.m2\repository\io\opentelemetry\opentelemetry-sdk-metrics\1.6.0-alpha\opentelemetry-sdk-metrics-1.6.0-alpha.jar;C:\Users\Gaurav Fugati.m2\repository\io\opentelemetry\opentelemetry-sdk-common\1.6.0\opentelemetry-sdk-common-1.6.0.jar;C:\Users\Gaurav Fugati.m2\repository\io\opentelemetry\opentelemetry-sdk-extension-autoconfigure-spi\1.6.0\opentelemetry-sdk-extension-autoconfigure-spi-1.6.0.jar;C:\Users\Gaurav Fugati.m2\repository\io\opentelemetry\opentelemetry-sdk-extension-autoconfigure\1.6.0-alpha\opentelemetry-sdk-extension-autoconfigure-1.6.0-alpha.jar;C:\Users\Gaurav Fugati.m2\repository\io\opentelemetry\opentelemetry-sdk-trace\1.6.0\opentelemetry-sdk-trace-1.6.0.jar;C:\Users\Gaurav Fugati.m2\repository\io\opentelemetry\opentelemetry-api-metrics\1.6.0-alpha\opentelemetry-api-metrics-1.6.0-alpha.jar;C:\Users\Gaurav Fugati.m2\repository\io\opentelemetry\opentelemetry-sdk\1.6.0\opentelemetry-sdk-1.6.0.jar;C:\Users\Gaurav Fugati.m2\repository\io\opentelemetry\opentelemetry-semconv\1.6.0-alpha\opentelemetry-semconv-1.6.0-alpha.jar;C:\Users\Gaurav Fugati.m2\repository\io\otel\otel\2.0.0\otel-2.0.0.jar;C:\Users\Gaurav Fugati.m2\repository\org\bytebuddy\byte-buddy\1.11.19\byte-buddy-1.11.19.jar;C:\Users\Gaurav Fugati.m2\repository\org\apache\commons\commons-exec\1.3\commons-exec-1.3.jar;C:\Users\Gaurav Fugati.m2\repository\org\asynchttpclient\async-http-client\2.12.3\async-http-client-2.12.3.jar;C:\Users\Gaurav Fugati.m2\repository\org\asynchttpclient\async-http-client-netty-utils\2.12.3\async-http-client-netty-utils-2.12.3.jar;C:\Users\Gaurav Fugati.m2\repository\io\netty\netty-codec-socks\4.1.60.Final\netty-codec-socks-4.1.60.Final.jar;C:\Users\Gaurav Fugati.m2\repository\io\netty\netty-handler-proxy\4.1.60.Final\netty-handler-proxy-4.1.60.Final.jar;C:\Users\Gaurav Fugati.m2\repository\io\netty\netty-transport-native-epoll\4.1.60.Final\netty-transport-native-epoll-4.1.60.Final-linux-x86_64.jar;C:\Users\Gaurav Fugati.m2\repository\io\netty\netty-transport-native-kqueue\4.1.60.Final\netty-transport-native-kqueue-4.1.60.Final-osx-x86_64.jar;C:\Users\Gaurav Fugati.m2\repository\org\reactivestreams\reactive-streams\1.0.3\reactive-streams-1.0.3.jar;C:\Users\Gaurav Fugati.m2\repository\com\typesafe\netty\netty-reactive-streams\2.0.4\netty-reactive-streams-2.0.4.jar;C:\Users\Gaurav Fugati.m2\repository\org\slf4j\slf4j-api\1.7.30\slf4j-api-1.7.30.jar;C:\Users\Gaurav Fugati.m2\repository\org\springframework\activation\jakarta.activation\1.2.2\jakarta.activation-1.2.2.jar;C:\Users\Gaurav Fugati.m2\repository\org\seleniumhq\selenium\selenium-http\4.0.0\selenium-http-4.0.0.jar;C:\Users\Gaurav Fugati.m2\repository\org\seleniumhq\selenium\selenium-support\4.0.0\selenium-support-4.0.0.jar;C:\Users\Gaurav Fugati.m2\repository\org\testng\testng\7.4.0\testng-7.4.0.jar;C:\Users\Gaurav Fugati.m2\repository\org\beust\commander\1.78\commander-1.78.jar;C:\Users\Gaurav Fugati.m2\repository\org\webjars\jquery\3.5.1\jquery-3.5.1.jar" com.intellij.rt.testng.RemoteTestNGStarter -useDefaultListeners false -socket57196 "w@C:\Users\GAURAV~1\AppData\Local\Temp\idea_working_dirs_testing.tmp" -temp "C:\Users\GAURAV~1\AppData\Local\Temp\idea_testing.tmp" ===== Default Suite Tests test runs: 1, Passes: 1, Failures: 0, Skips: 0 ===== Process finished with exit code 0</pre>		
HMS		32.55 s
BookAppointment		32.55 s
BookAppointment.TC_WB_BA1_bookingappointment	passed	24.55 s

Conclusion:

Performed automation testing using selenium web drivers on a self-developed web-application and verified that no bugs or defects were found