IT314
Software Engineering

Group 5
Hostel Management System

Non-Functional Testing

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Date: 24/04/2023

1) Security:

- Authentication: Our hostel management system has a secure authentication process to ensure only authorized users of the organization such as students and admin has access to the system.
- Encryption: All the sensitive data such as user credentials is encrypted while storing into MongoDB server using the inbuilt encryption library called ‘bcrypt’.
- Environment Variables: Implemented Donenv package to store environment variables including MongoDB connection URL, port number etc.

2) Reliability:

- Upto 200 authorized users, our system ensures that more than 95% of simultaneous users can access this software system whenever needed without crashing the server or slowing down significantly.
- Using the paid deployment services, we can improve this number significantly and also make this system more reliable.
- The localhost version is reliable for more than 1000 simultaneous users with 100% availability of the system.

3) Availability:

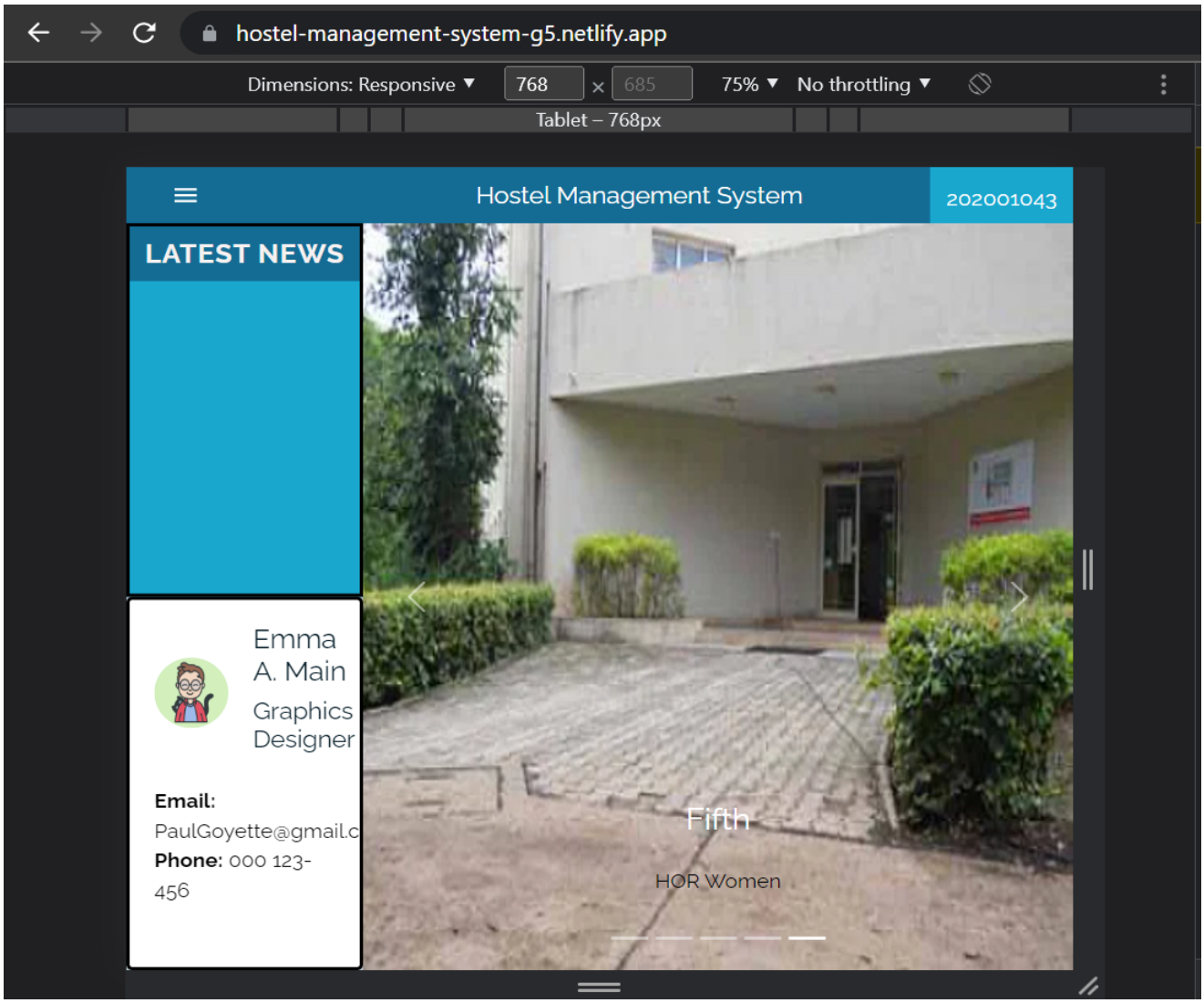
- The system is available 24 hours a day and 7 days a week and accessible from anywhere using any device with internet access.
- User can access this system with a minimum response time of 5 seconds for all user actions like login, view entire list of notices or complaints etc.

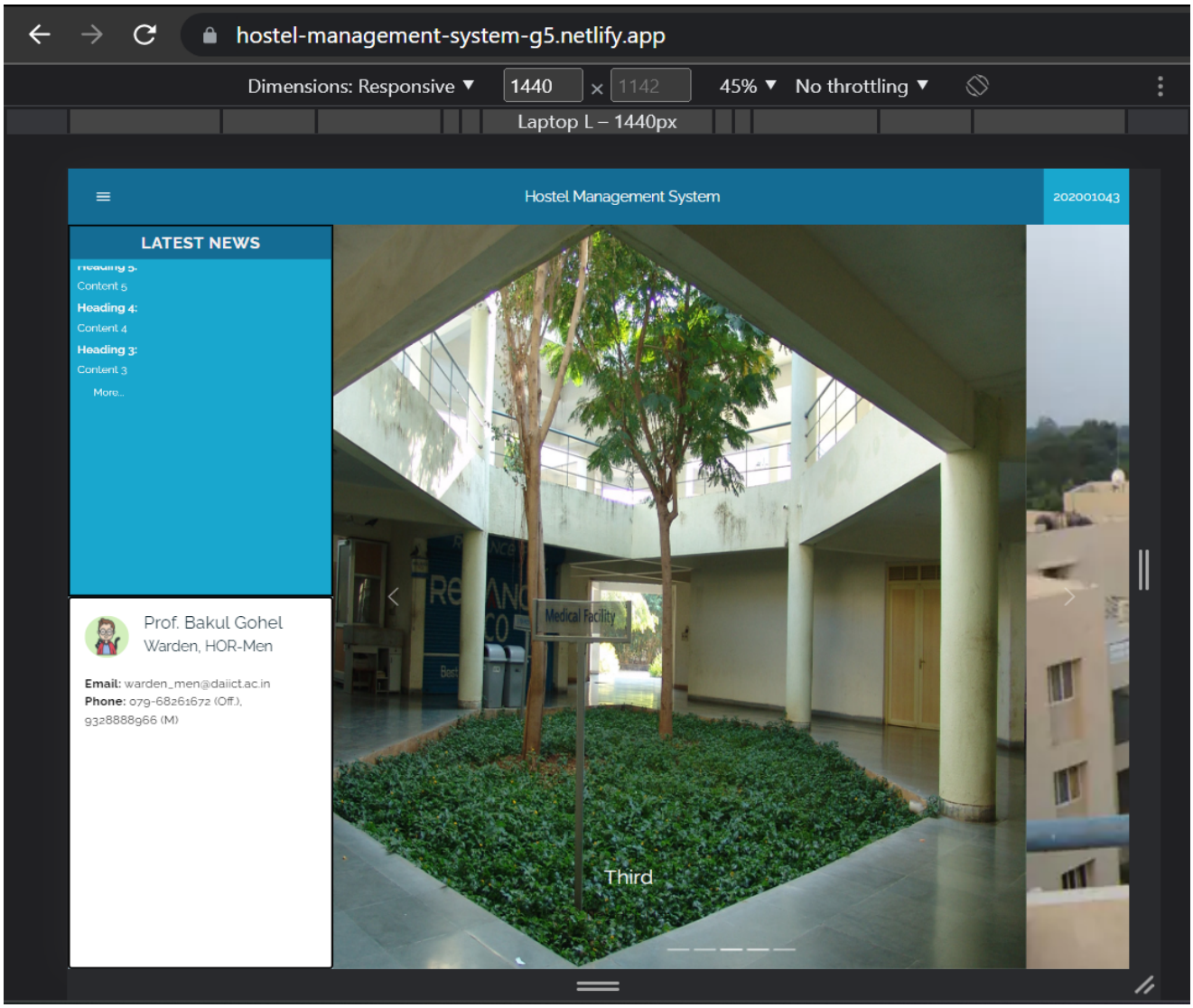
4) Flexibility:

- The system flexible in adding any future changes in functionalities according to the organization's need.

5) Responsiveness :

- The system is responsive so the users can interact with the system easily.
- The system is platform-independent, meaning user can use this system on any different operating systems such as macOS, Windows, and Linux.

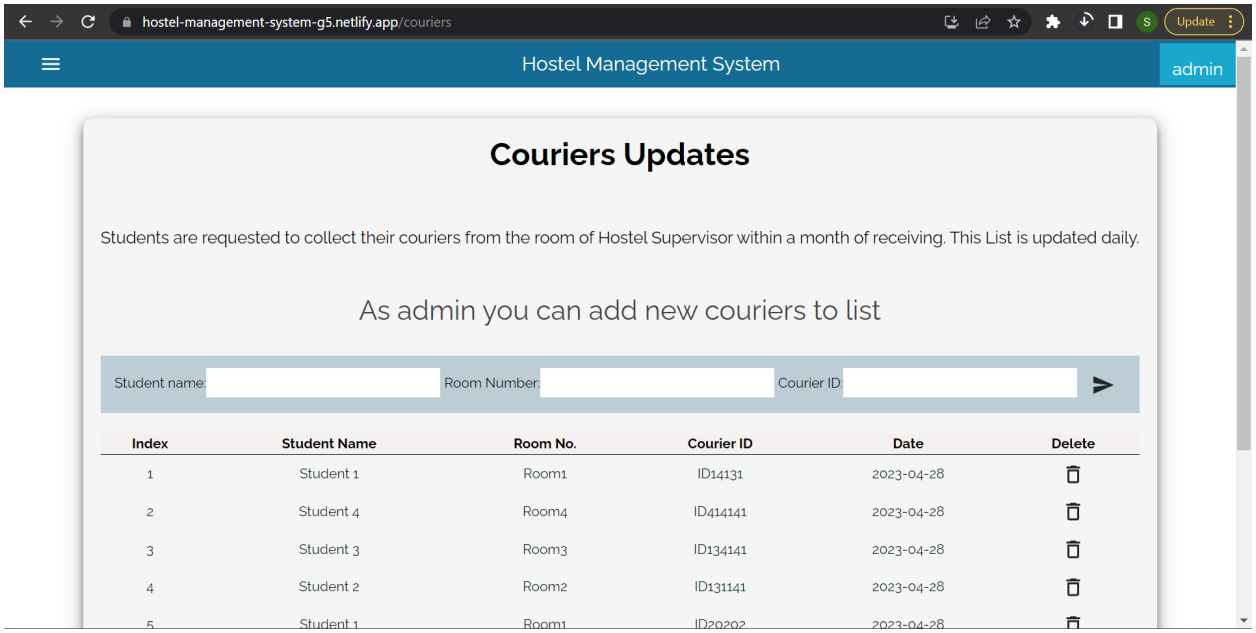



hostel-management-system-g5.netlify.app
Dimensions: Responsive
1440
1142
45%
No throttling
Laptop L – 1440px
Hostel Management System
202001043
LATEST NEWS
Content 5
Heading 4:
Content 4
Heading 3:
Content 3
More...
Prof. Bakul Gohel
Warden, HOR-Men
Email: warden_men@daiict.ac.in
Phone: 079-68261672 (Off.), 9328888966 (M)
Medical Facility
Third

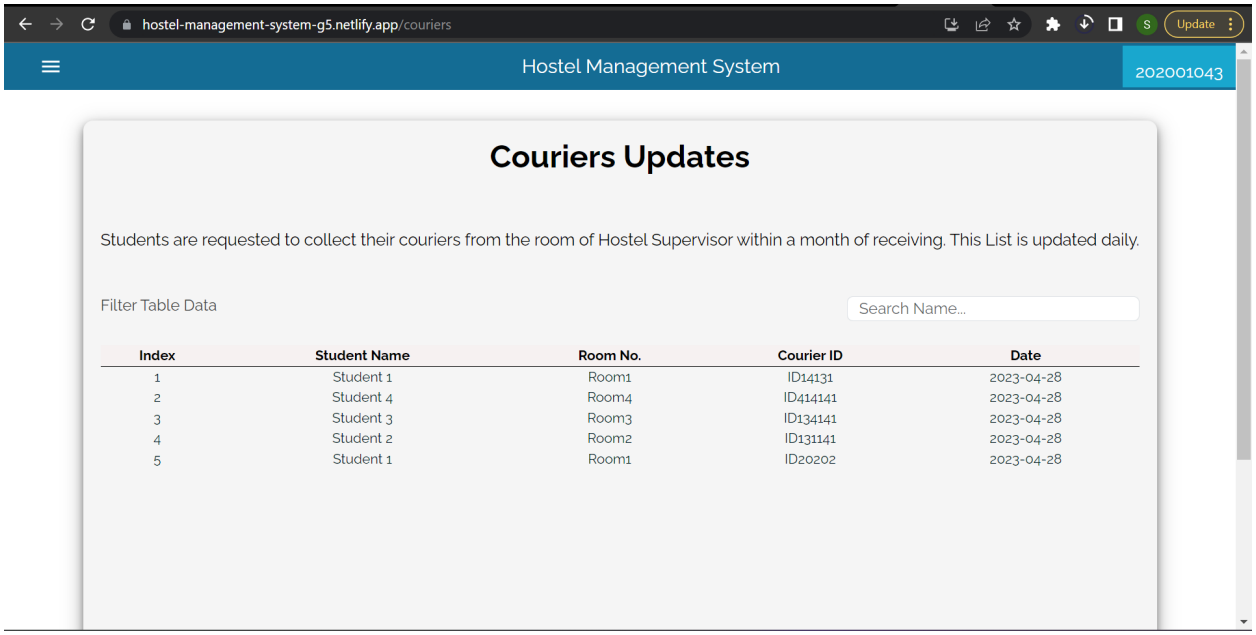
6) Reusability:

- We have built reusable components so that is functions differently according to the role of the user and its position in the organization.

- Couriers page for Admin:



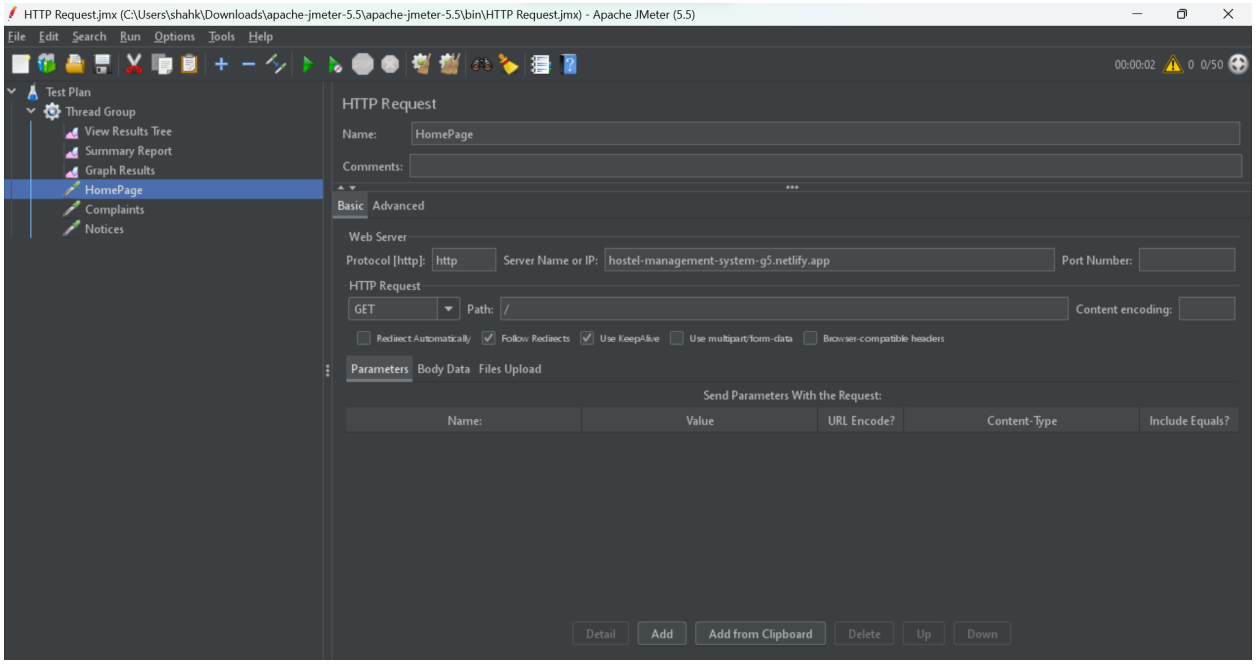
- Couriers page for Students :



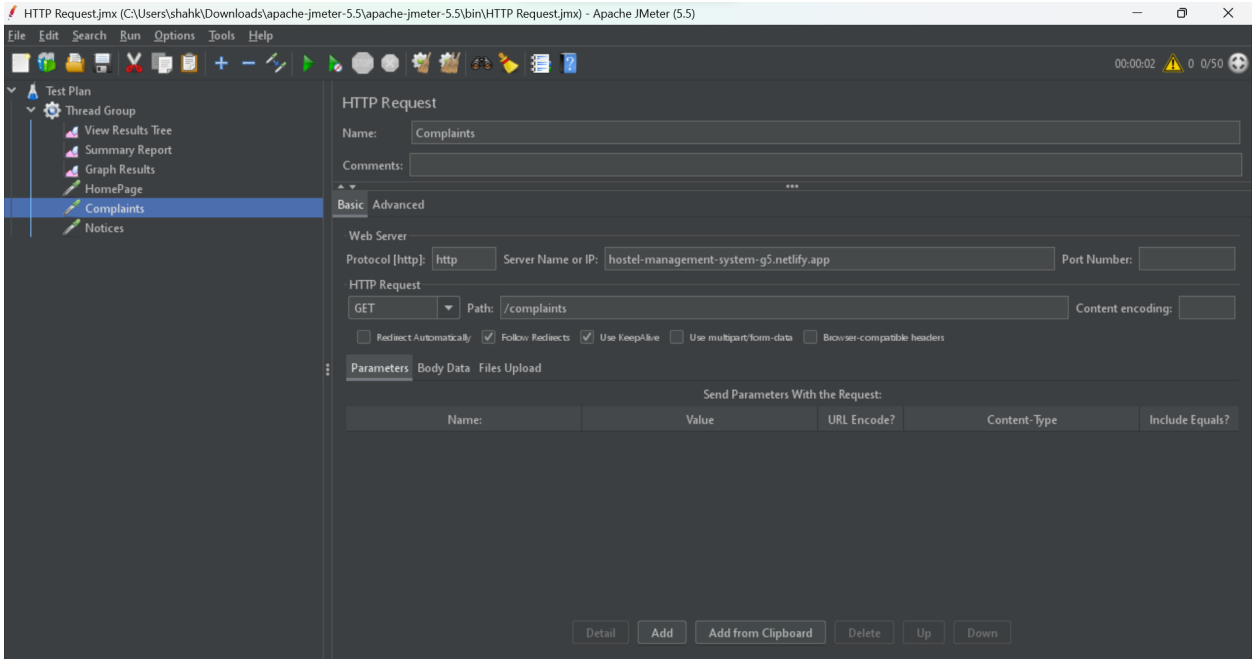
7) Performance Testing (Load testing) :

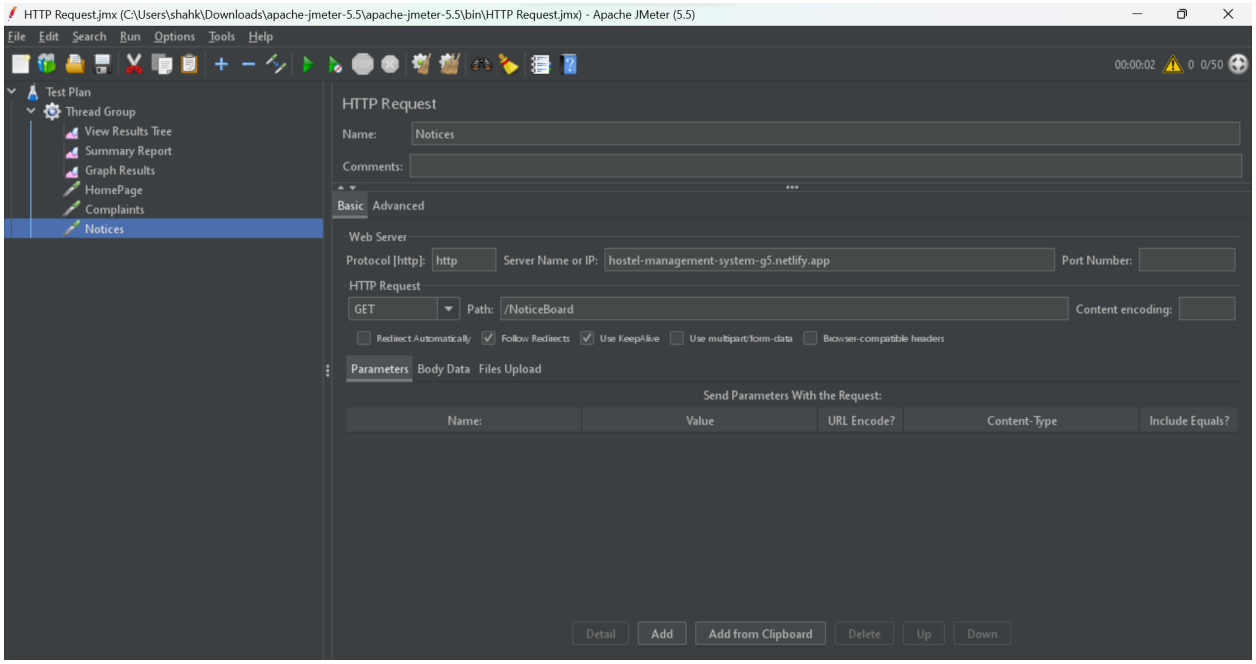
- We have used Apache Jmeter tool to test our system after deploying on free hosting provider - Netlify.

  - Load Testing of Home page, Complaints page and Notices page.

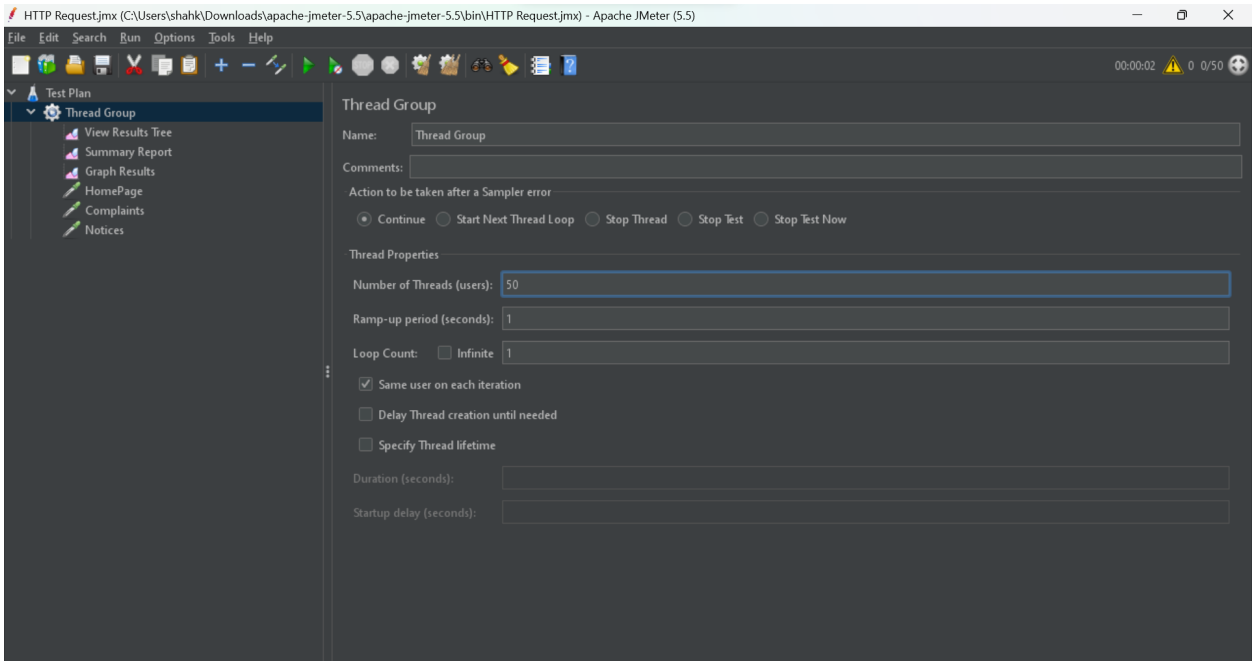


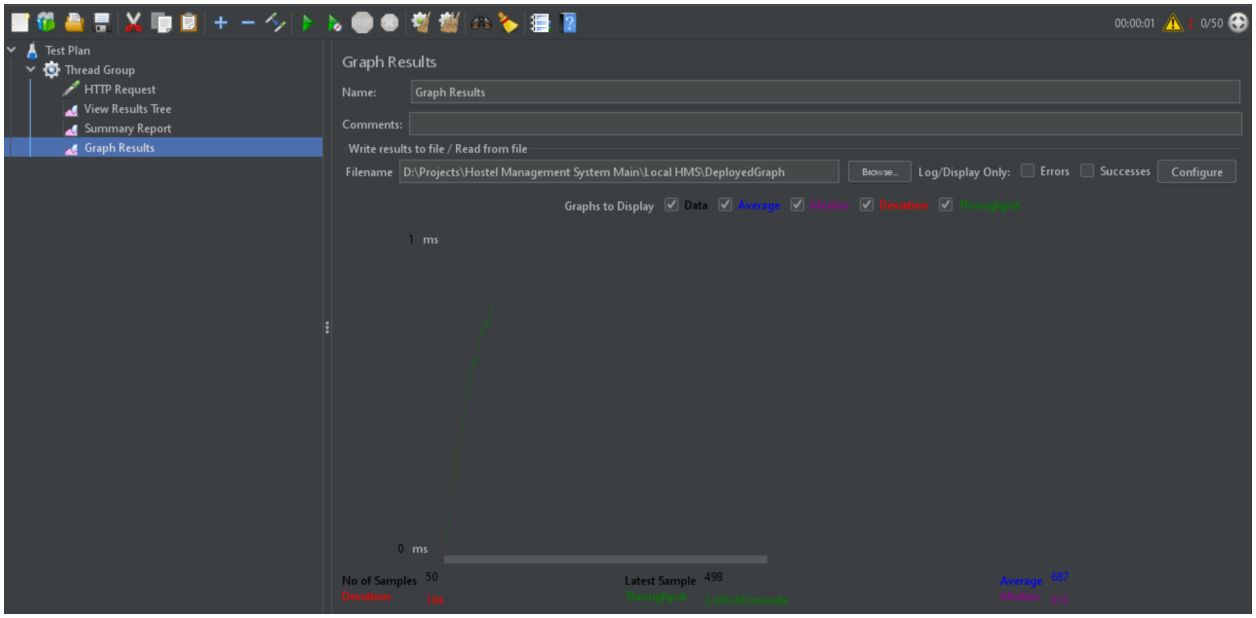
  - Given appropriate paths to test the system,



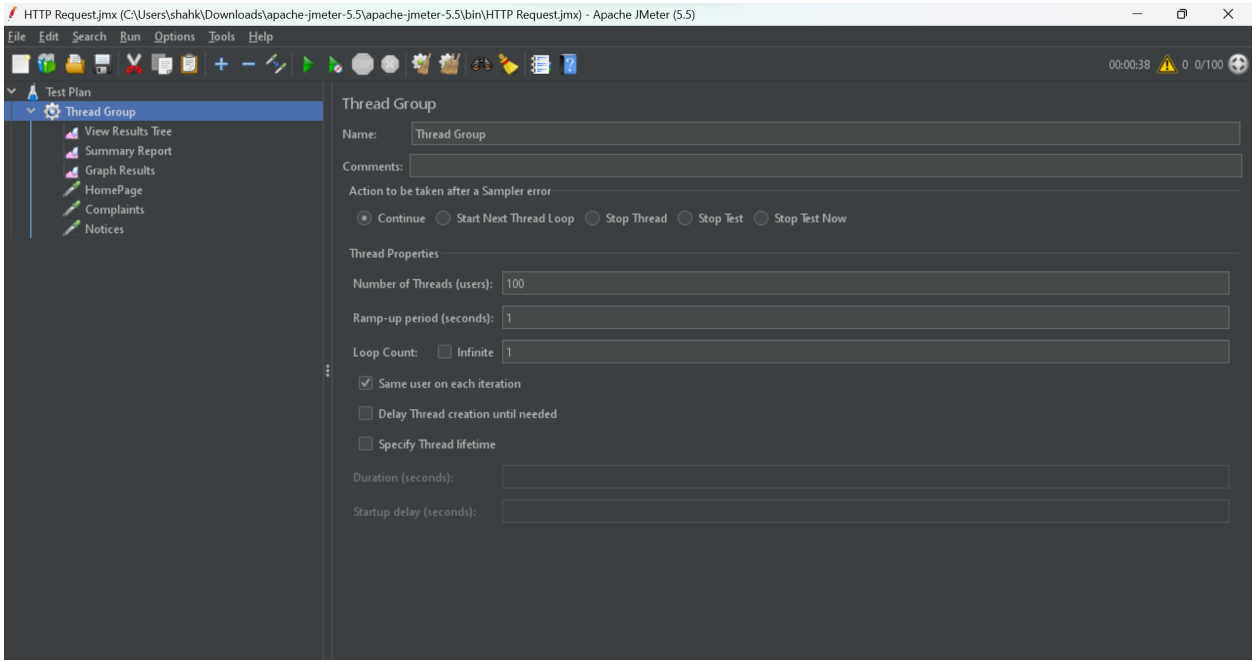


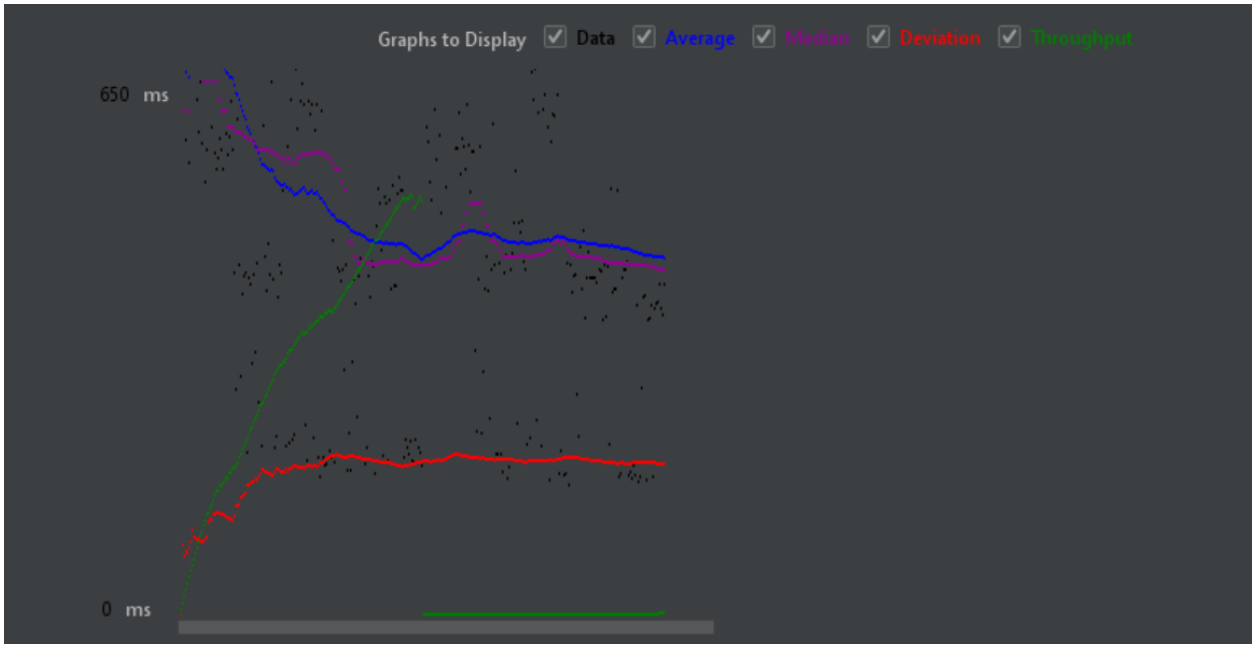
- **Test 1 :** For 50 simultaneous users on all three pages,



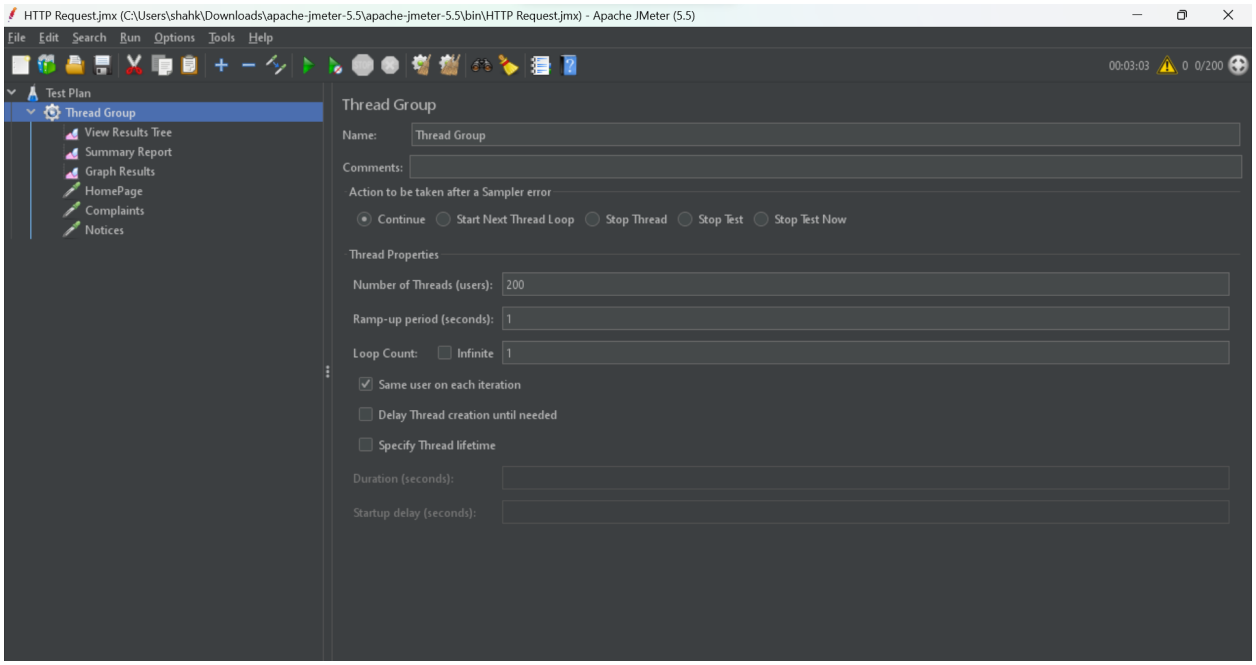


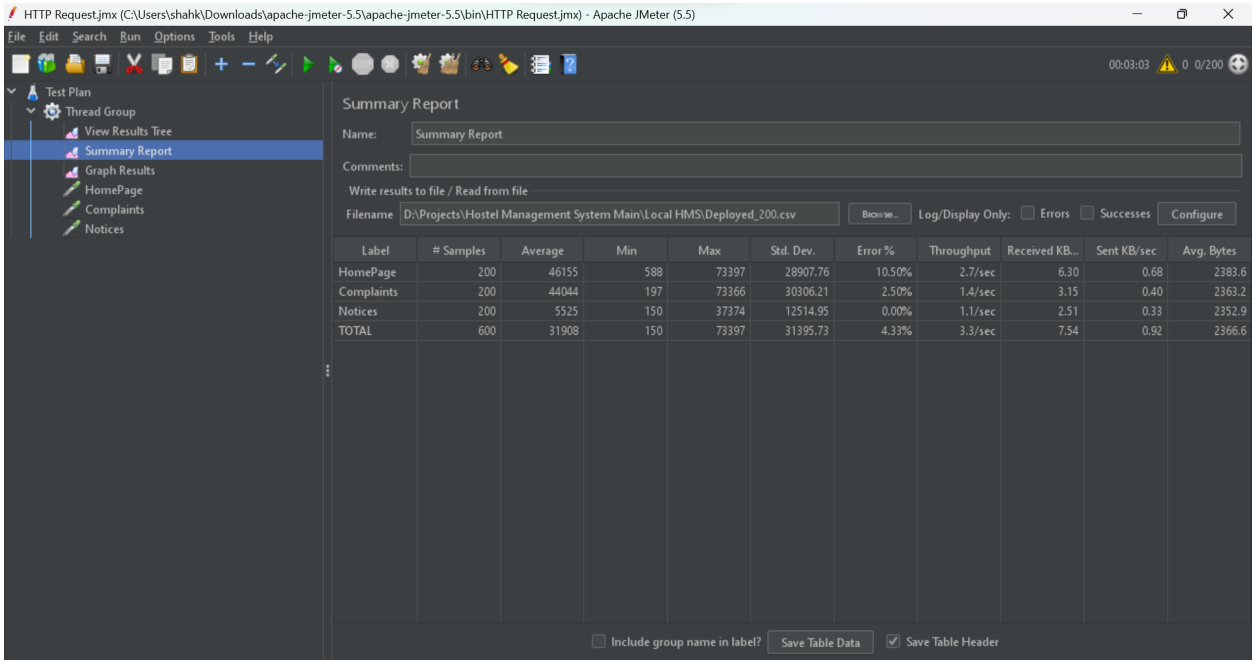
- **Test 2 :** For 100 simultaneous users,

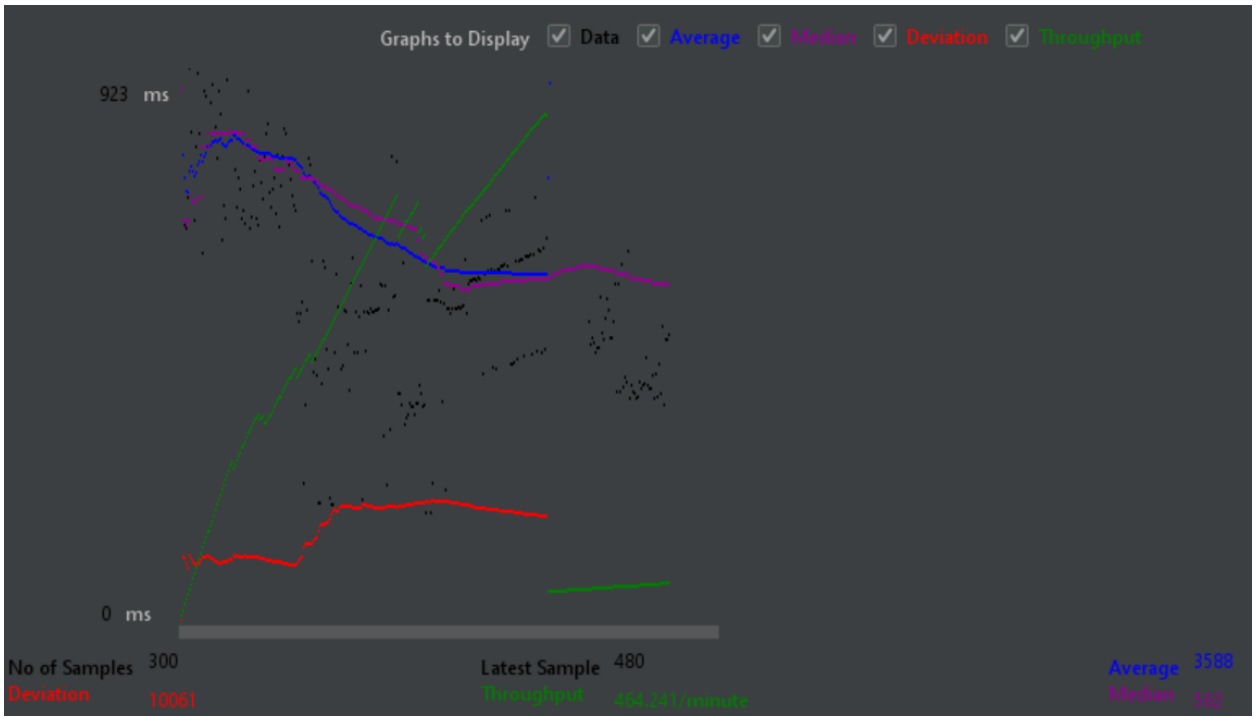




- Test 3 : For 200 simultaneous users,







- We have provides the whole summery report of this testing in excel files of all three tests and also for the deployed and localhost version.