IT314 – Software Engineering

Group 25

Diagnosis Expert System

Table of content

Introduction: Non-Functional Testing

This document outlines the non-functional testing strategy to ensure the system's performance, security, and overall reliability.
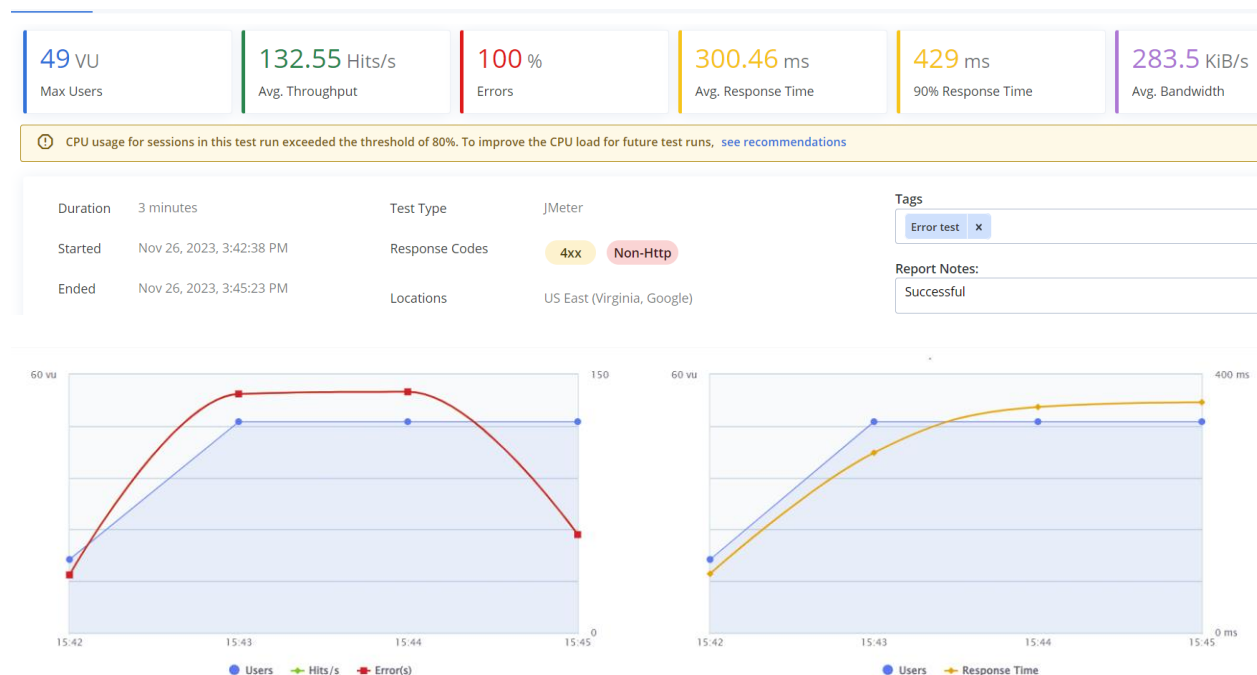
1. Performance Testing:

Objective: To assess the system's responsiveness, scalability, and overall performance under various conditions.
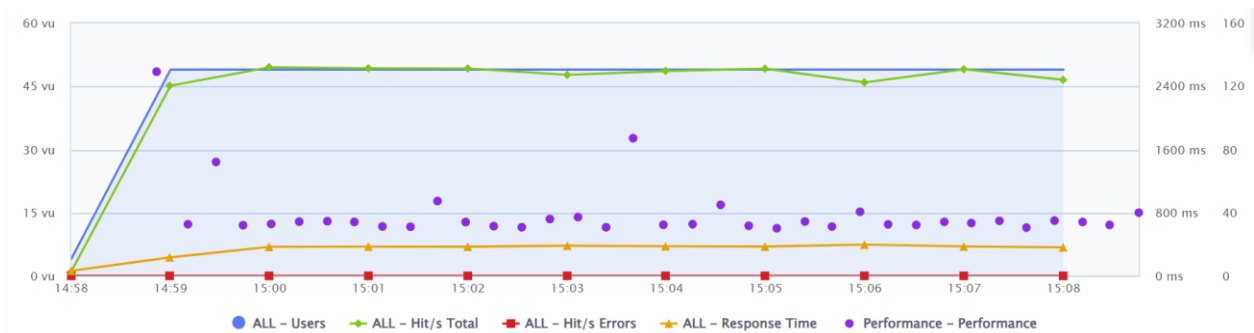
Tools used: Blaze-meter

This test is conducted on 2 CPU and 1 fixed location US East Virginia Google cloud. Maximum users considered is 50 at a time for 10 minutes at 1 minute ramp up time. Errors noticed are 0.

Moreover for Pages which needs authentication it shows error 403 Forbidden and its error percentage is 100 as it is not able to access that page. This fulfill the acceptance criteria.

49 VU	132.55 Hits/s	100 %	300.46 ms	429 ms	283.5 KiB/s
Max Users	Avg. Throughput	Errors	Avg. Response Time	90% Response Time	Avg. Bandwidth

⚠ CPU usage for sessions in this test run exceeded the threshold of 80%. To improve the CPU load for future test runs, see recommendations

					Tags
Duration	3 minutes	Test Type	JMeter		Error test ✕
Started	Nov 26, 2023, 3:42:38 PM	Response Codes	4xx Non-Http		Report Notes:
Ended	Nov 26, 2023, 3:45:23 PM	Locations	US East (Virginia, Google)		Successful

● Users ─Hits/s ■ Error(s)

● Users ─ Response Time

We claim up to 1 lakh hits in 1 hour.

49 VU	128.42 Hits/s	0 %	360.45 ms	475 ms	2.19 MiB/s
Max Users	Avg. Throughput	Errors	Avg. Response Time	90% Response Time	Avg. Bandwidth

| Label Id	Element Label	# Samples	Avg. Response	Avg. Hits/s	Min Response Time (	Max Response Time	Avg. Bandwidth	Error Percentage
1	https://medai2	77050	360.45	128.42	33	4535	2240.14	0

Label Id	Element Label	# Samples	Avg. Respons	Avg. Hits/s	Min Response Ti	Max Response Time	Avg. Bandwidth (KBytes/s)	Error Percentag
1	Performance te	65763	325.04	138.16	30	727	1205.1	0

2.Compatibility testing:

Objective: To ensure the website functions consistently across different browsers, devices, and operating systems.

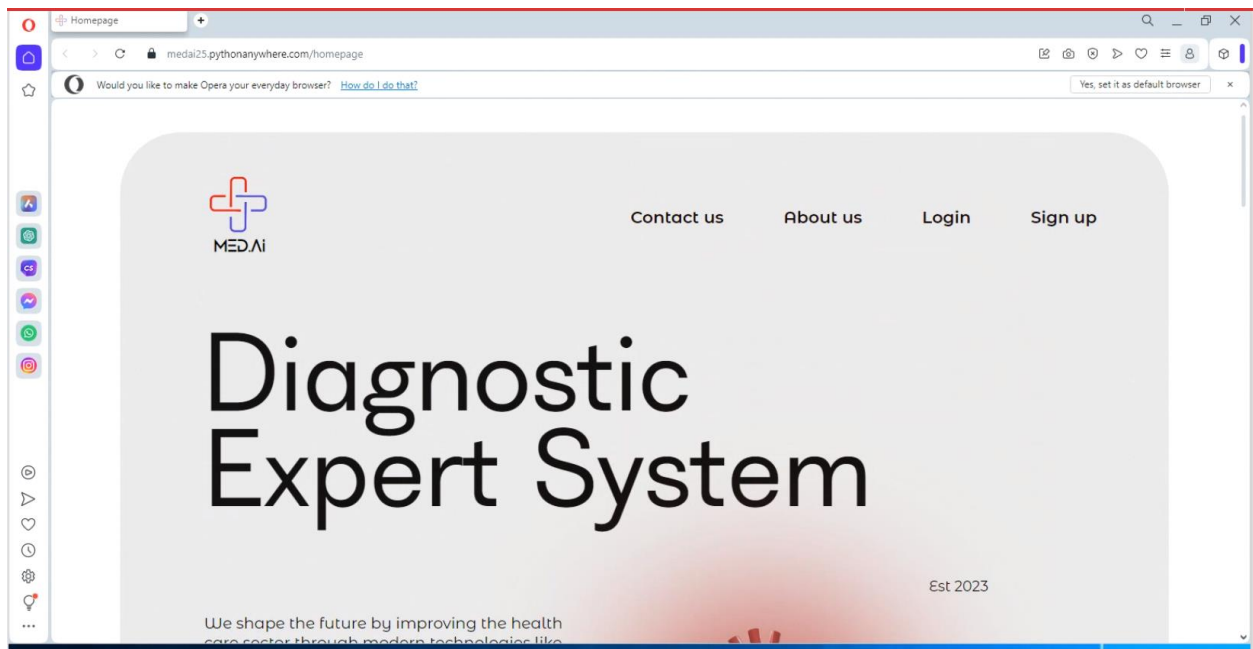Tools: Sauce Labs, providing cloud based cross browsing

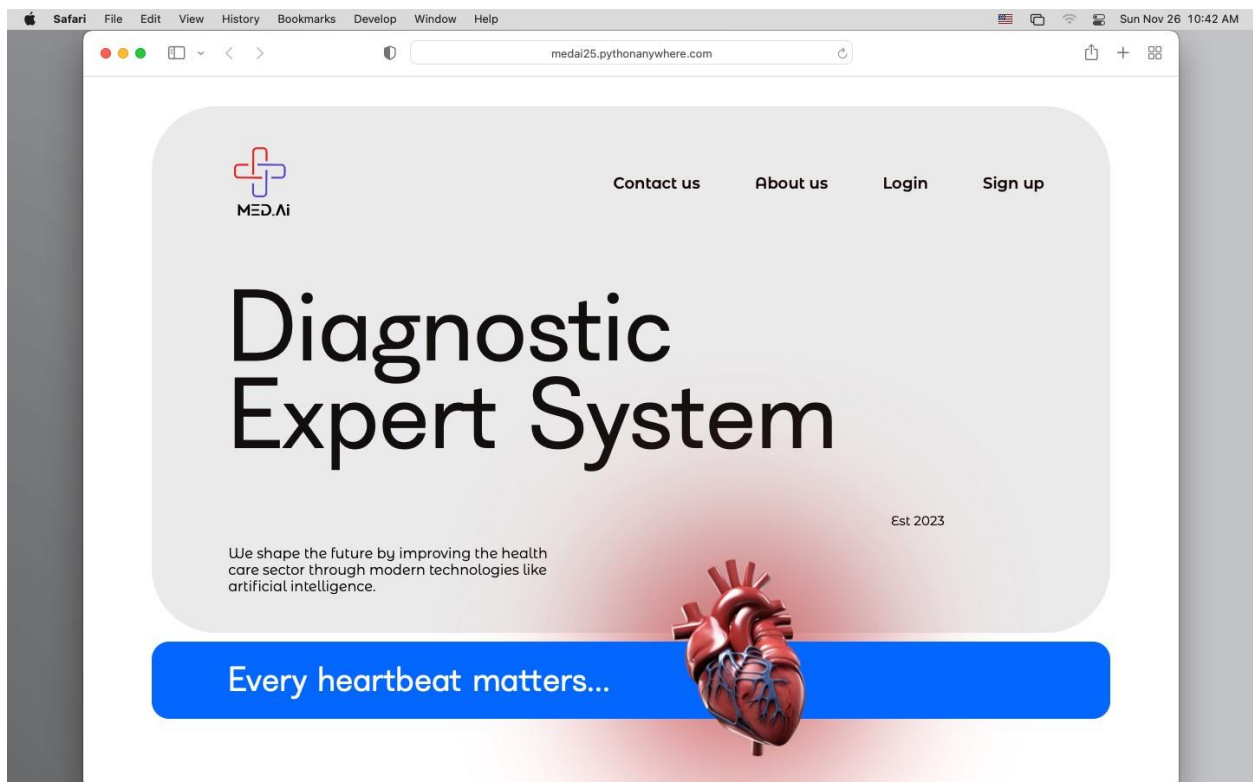Windows 11 - Brave: version 118 , Resolution: 1496x 705
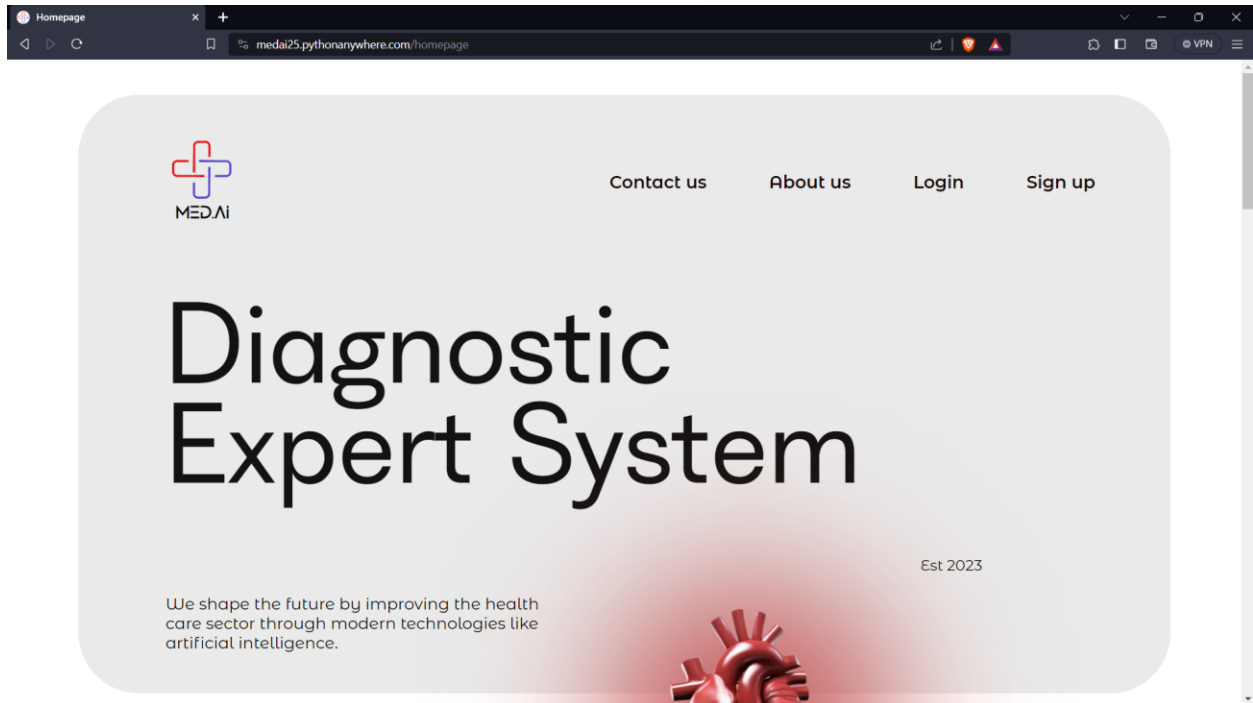
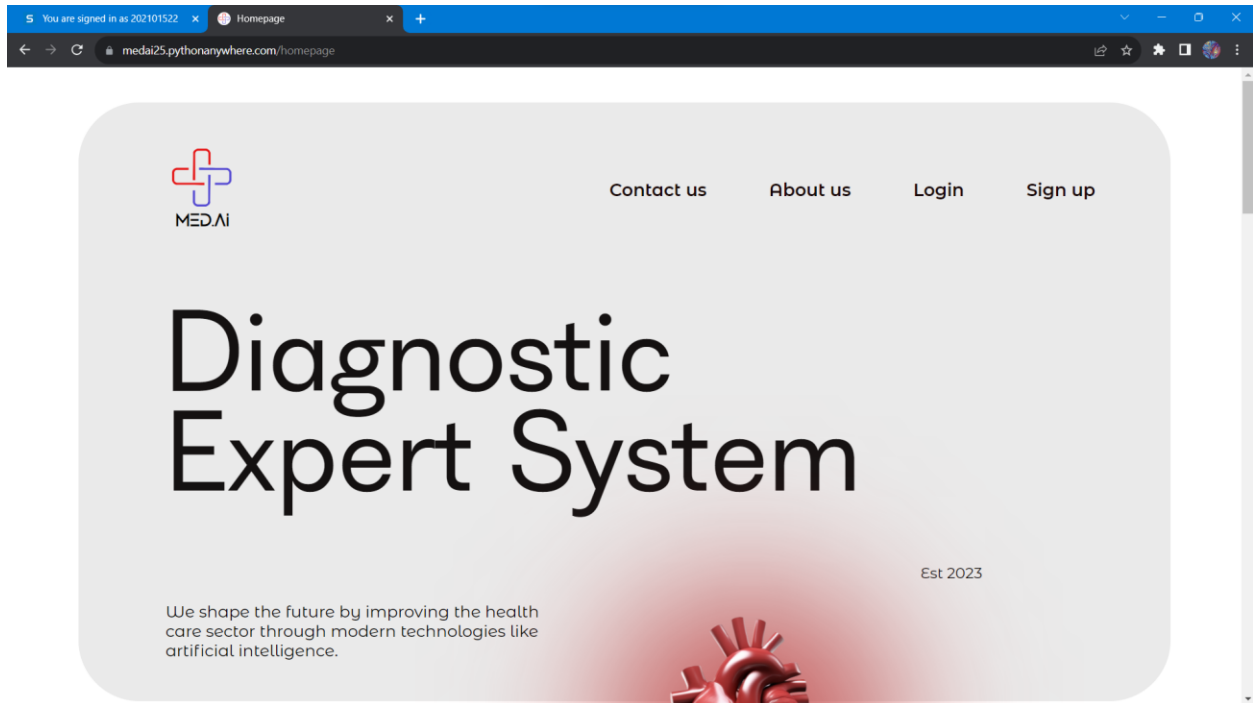Windows 11 – Microsoft Edge: version 118 , Resolution: 1440x900
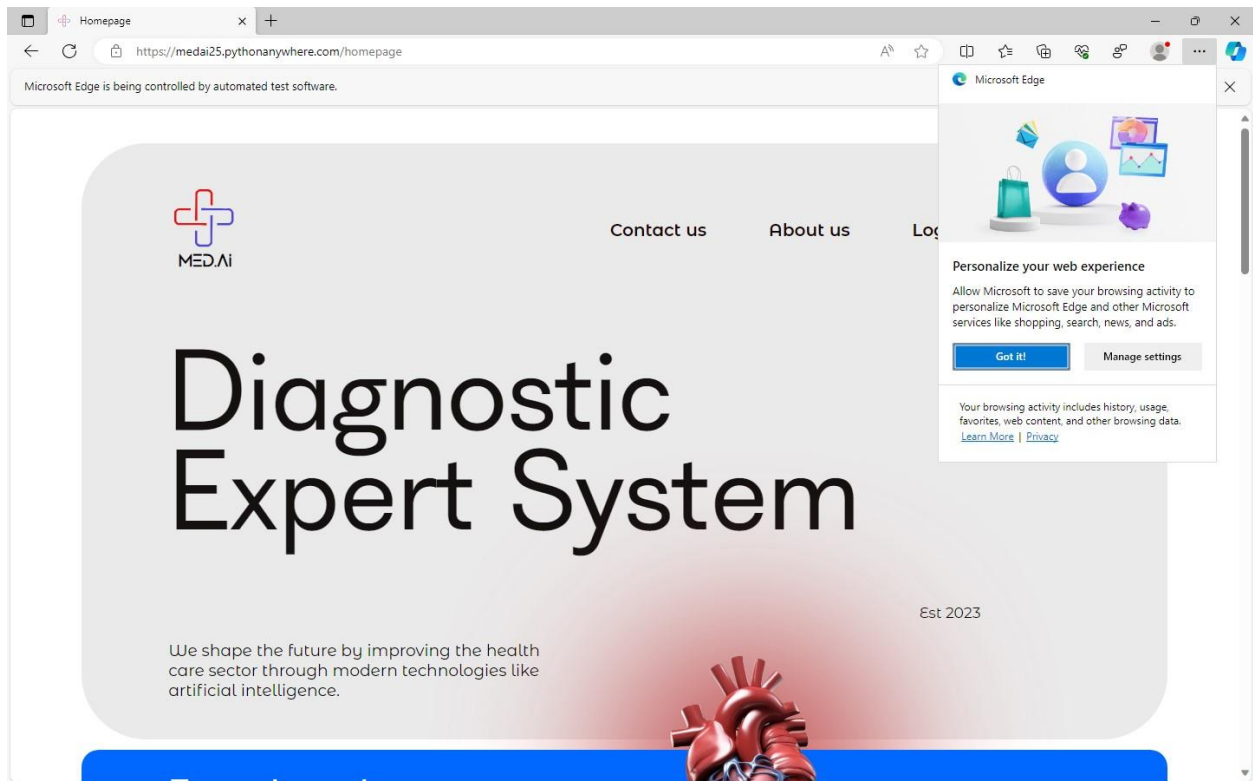
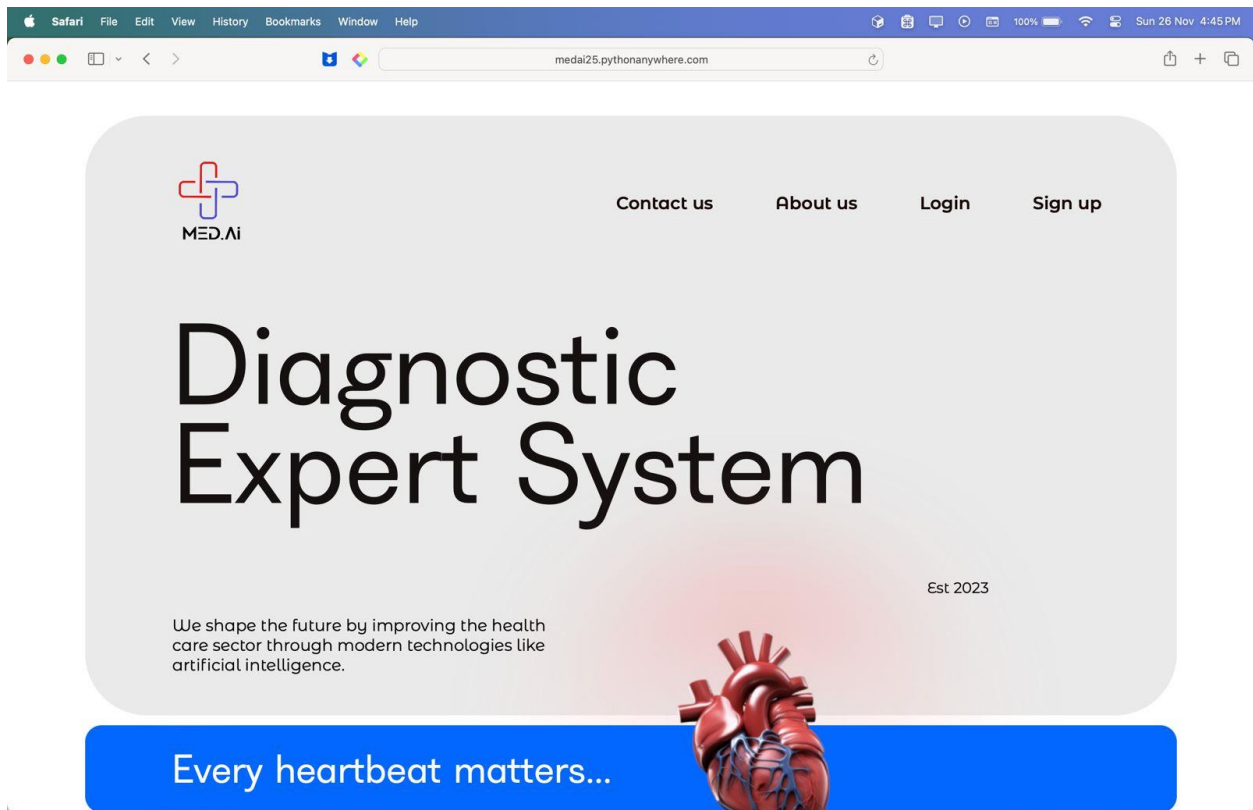Windows 11 - Opera – version 105. Resolution : 1536 x 796

MacOS- Safari 15 Monterey Resolution 1440x900

Windows 11- Chrome Version 119 Resolution 1496x900

MacOS- Safari 17 Sonoma Resolution 1440x900

It is observed that the website is compatible to almost all the version of web browsers and across different system like Mac, windows and linux.
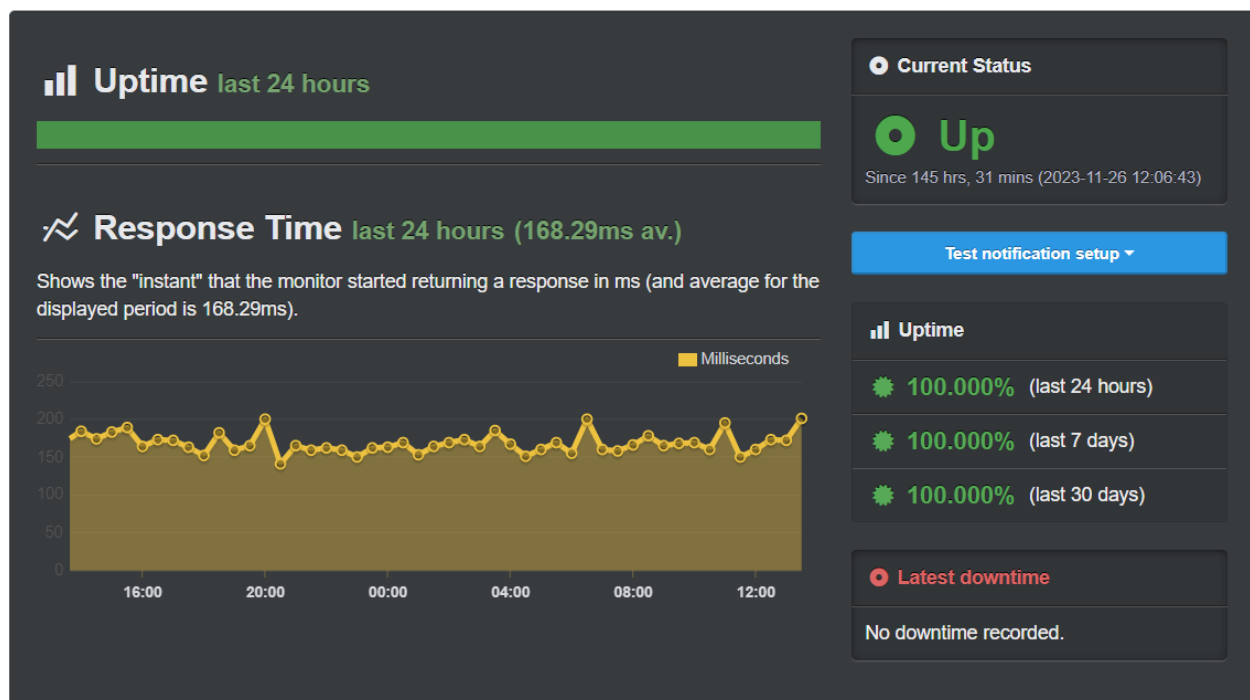
3. Reliability and Availability Testing:

Objective: To ensure the system's reliability and availability under different conditions.

Tool used: Uptime Robot

The monitor tracking is implemented and the website is live 24 hrs.

Any issue noticed would be notified to the user through mail from uptime robots.
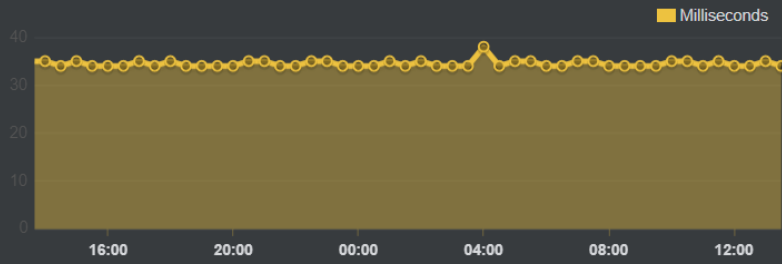
HTTP Request and its response time

Ping and its response time

📊 Uptime last 24 hours

📈 Response Time last 24 hours (34.47ms av.)

Shows the "instant" that the monitor started returning a response in ms (and average for the displayed period is 34.47ms).

■ Milliseconds

40					
30					
20					
10					
0					

16:00　　20:00　　00:00　　04:00　　08:00　　12:00

⊙ Current Status

⊙ Up
Since 145 hrs, 34 mins (2023-11-26 12:05:43)

Test notification setup ▾

📊 Uptime

✹ **100.000%** (last 24 hours)

✹ **100.000%** (last 7 days)

✹ **100.000%** (last 30 days)

⊙ Latest downtime

No downtime recorded.