Software Engineering (IT314)



Group No: 28

Project Name: Ecommerce Price Comparison

Non Functional Testing

- 1. Performance Testing
 - 1.1 Root Page of The Website
 - 1.2 View Search History
 - 1.3 Compare Product By Two Store Name
 - 1.4 Forgot Password
- 2. Responsiveness Testing

1. Performance Testing

1.1 Root Page of Website

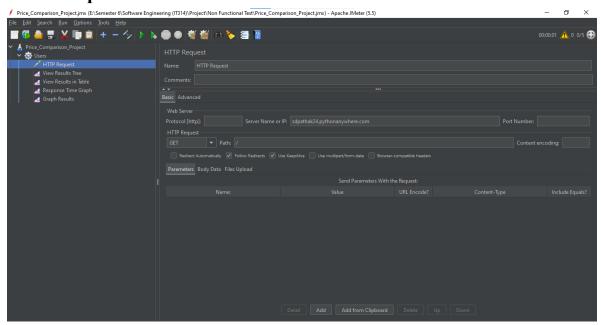
1.1.1 Method : **Get**

Number of Users: 5

Ramp Up Period: 1 second

Loop Count: 2

• HTTP Request



• Results in Tree



• Results in Table

Sample #	Start Time	Thread Name	Label	Sample Time(Status	Bytes	Sent Bytes	Latency	Connect Time(
1	10:52:40.509		HTTP Request		⊗				
2	10:52:40.718	Users 1-2	HTTP Request		⊙	1059	134		
3	10:52:41.063	Users 1-1	HTTP Request		⊙		134		
4	10:52:40.918	Users 1-3	HTTP Request	426	⊙		134	426	
5	10:52:41.179	Users 1-2	HTTP Request		€		134		
6	10:52:41.345	Users 1-3	HTTP Request	225	⊙		134	225	
7	10:52:41.121	Users 1-4	HTTP Request	489	⊙		134	489	
8	10:52:41.310	Users 1-5	HTTP Request	472	⊙		134	472	
9	10:52:41.611	Users 1-4	HTTP Request		⊙		134		
10	10:52:41.783	Users 1-5	HTTP Request		©		134		
Scroll automat	ically? 🔲 Child s	amples?	No of Sample	s 10	Latest Sample	226 Aver			

• Overall Graph Results



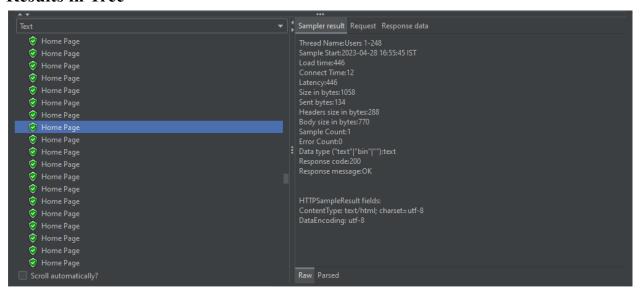
1.1.2 Method: Get

Number of Users: 400

Ramp Up Period: 5 second

Loop Count: 1

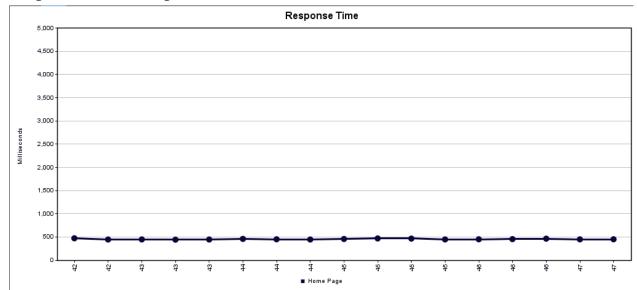
• Results in Tree



• Results in Table

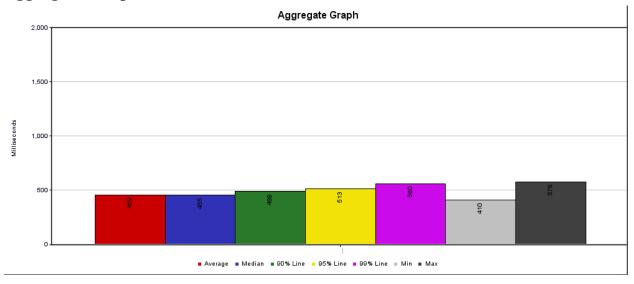


• Response Time Graph



Response Time: 500 ms

• Aggregate Graph



• Overall Graph Results



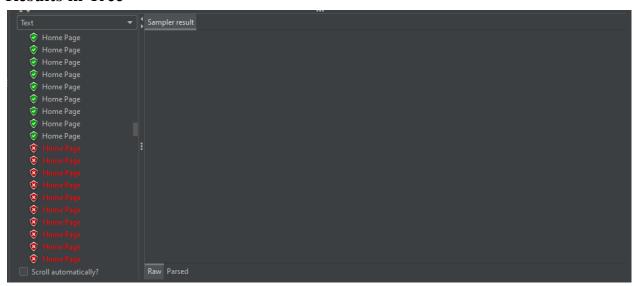
1.2.3 Method: Get

Number of Users: 300

Ramp Up Period: 1 second

Loop Count: 1

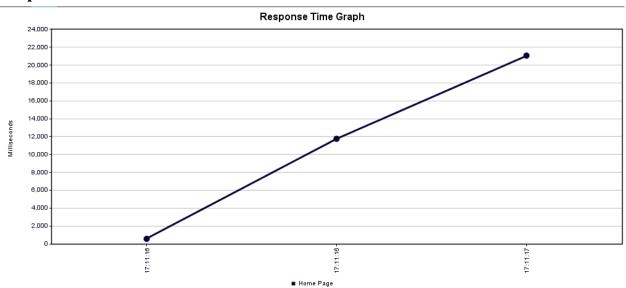
• Results in Tree



• Results in Table

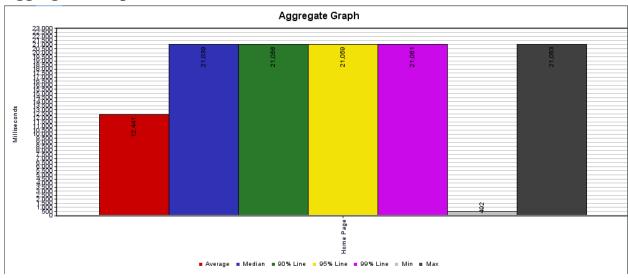
Sample #	Start Time	Thread Name	Label	Sample Time(Status	Bytes	Sent Bytes	Latency	Connect Time(
118	17:11:16.918	Users 1-122	Home Page		⊙				
119	17:11:16.902	Users 1-117	Home Page		©				
120	17:11:16.899	Users 1-116	Home Page	585	©	1058		585	
121	17:11:16.893	Users 1-114	Home Page		©				
122	17:11:16.908	Users 1-119	Home Page	579	©			579	
123	17:11:16.927	Users 1-125	Home Page	560	€			560	
124	17:11:16.915	Users 1-121	Home Page	572	©			572	
125	17:11:16.920	Users 1-123	Home Page		⊙		134		
126	17:11:16.927	Users 1-126	Home Page		€				
127	17:11:16.934	Users 1-127	Home Page	21059	©				21059
128	17:11:16.941	Users 1-130	Home Page	21052	©				21052
129	17:11:16.948	Users 1-132	Home Page	21045	©	2760			21045
130	17:11:16.944	Users 1-131	Home Page	21049	©				21049
131	17:11:16.946	Users 1-133	Home Page	21047	©	2760			21047
132	17:11:16.937	Users 1-128	Home Page	21056	⊗	2760			21056
133	17:11:16.939	Users 1-129	Home Page	21054	©				21054
134	17:11:16.991	Users 1-145	Home Page	21034	©	2760			21033
135	17:11:16.982	Users 1-142	Home Page	21042	⊗	2760			21042
136	17:11:16.979	Users 1-141	Home Page	21045	⊗				21045
137	17:11:16.988	Users 1-144	Home Page	21036	⊗	2760			21036
Scroll automatic	cally? 🔲 Child s	amples?	No of Sampl	es 300	Latest Sample	21048 Ave	rage 12441	Deviation 10114	

• Response Time

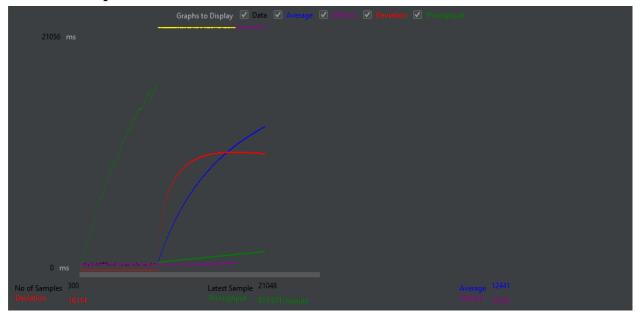


Response Time is Increasing Linearly

Aggregate Graph



• Overall Graph



Results:

- Here Sample Number 126 is a Peak Value for our Website.
- Response Time is Increasing Linearly.
- Maximum is Very High.

1.2 View Search History

1.2.1 Method : **Get**

Number of Users: 10

Ramp Up Period: 1 second

Loop Count: 2

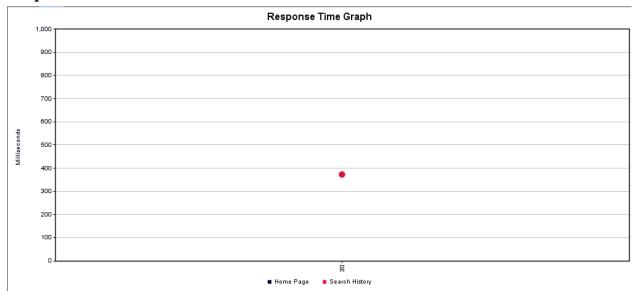
• View Results in Tree



• View Results in Table

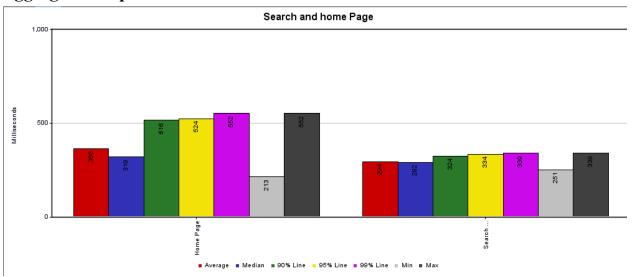
Sample #	Start Time	Thread Name	Label	Sample Time(Status	Bytes	Sent Bytes	Latency	Connect Time(
	17:35:39.418	Users 1-1	Search History		€		148	296	
	17:35:39.261	Users 1-10	Home Page		⊗			464	
	17:35:39.559	Users 1-6	Home Page		€				
	17:35:39.533	Users 1-2	Search History		€		148		
25	17:35:39.533	Users 1-4	Home Page		€		134		
	17:35:39.533	Users 1-8	Search History	324	€	5517	148		
	17:35:39.591	Users 1-3	Search History		€		148		
	17:35:39.601	Users 1-9	Search History		€		148		
	17:35:39.698	Users 1-7	Home Page		€				
	17:35:39.725	Users 1-10	Search History		€		148		
	17:35:39.714	Users 1-5	Search History		ூ		148		
	17:35:39.772	Users 1-6	Search History		ூ		148		
	17:35:39.852	Users 1-4	Search History	270	ூ		148		
34	17:35:39.857	Users 1-8	Home Page		€		134		
	17:35:39.940	Users 1-9	Home Page		ூ		134		
	17:35:39.975	Users 1-7	Search History	251	ூ		148	251	
	17:35:40.017	Users 1-10	Home Page		€		134		
	17:35:40.122	Users 1-8	Search History		€		148		
	17:35:40.164	Users 1-9	Search History	257	€		148	257	
	17:35:40.240	Users 1-10	Search History		€		148		

• Response Time



Response Time is 390 ms.

• Aggregate Graph



• Overall Graph



Result:

• Website is Working Fine For This Test.

1.2.2 Method: Get

Number of Users: 200

Ramp Up Period: 2 second

Loop Count: 2

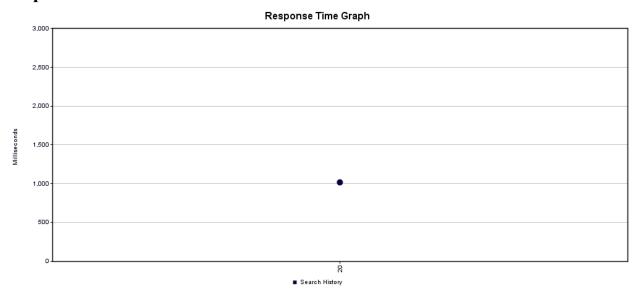
• View Results in Tree



• View Results in Table

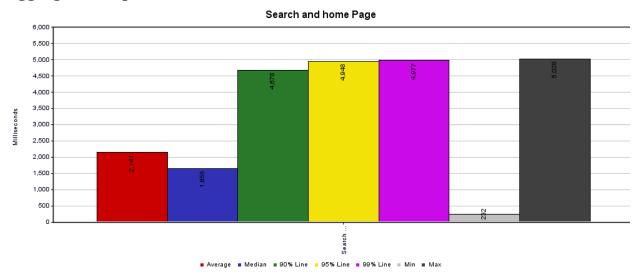
Sample #	Start Time	Thread Name	Label	Sample Time(Status	Bytes	Sent Bytes	Latency	Connect Time(
219	17:43:32.240	Users 1-196	Search History		⊗				
220	17:43:32.240	Users 1-49	Search History	246	⊗	1903	148	246	
221	17:43:30.197	Users 1-57	Search History		€		148		
222	17:43:30.247	Users 1-62	Search History		€		148		
223	17:43:32.289	Users 1-53	Search History	236	⊗	1903	148	236	
224	17:43:32.243	Users 1-197	Search History		⊗	1903	148		
225	17:43:30.207	Users 1-58	Search History	2374	€		148	2374	
226	17:43:30.227	Users 1-60	Search History		€		148	2373	
227	17:43:30.288	Users 1-66	Search History	2356	€		148	2356	
228	17:43:30.237	Users 1-61	Search History	2428	€		148	2428	
229	17:43:30.258	Users 1-63	Search History	2436	€		148	2436	
230	17:43:30.268	Users 1-64	Search History	2481	€		148	2481	
231	17:43:30.494	Users 1-12	Search History	2268	€		148	2268	
232	17:43:30.279	Users 1-65	Search History	2521	€		148	2521	
233	17:43:30.217	Users 1-59	Search History		€		148		
234	17:43:30.298	Users 1-67	Search History	2563	ூ		148	2563	
235	17:43:30.317	Users 1-69	Search History	2604	ூ		148	2604	
236	17:43:30.307	Users 1-68	Search History		€		148		
237	17:43:30.328	Users 1-70	Search History		€		148	2650	
238	17:43:30.337	Users 1-71	Search History	2654	ூ	5517	148	2654	
Scroll automatic	cally? 🔲 Child s	amples?	No of Sample	es 400	Latest Sample	3996 Ave	rage 2141	Deviation 1747	

• Response Time

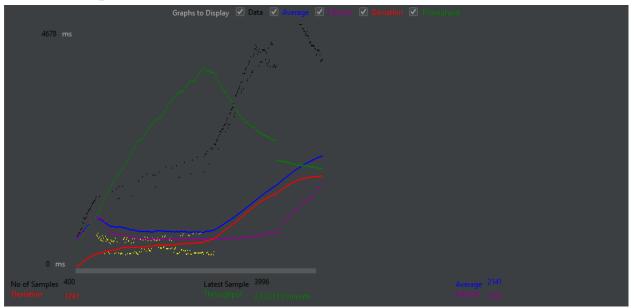


Response Time is 1000 ms.

• Aggregate Graph



• Overall Graph



Results:

- Here Every sample ran perfectly.
- But when we increased number of threads for some samples we get Response Code: 502
- Which means that the Website wasn't able to serve the requested object because it couldn't connect to the original server.

1.3 Compare Product by Two Store Name:

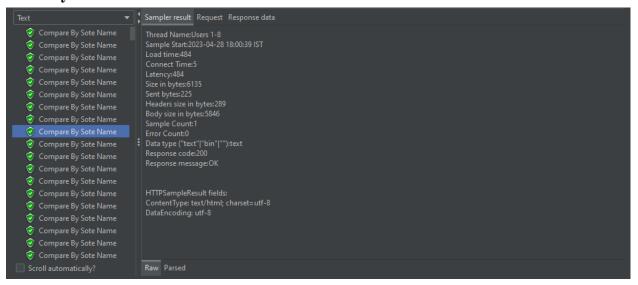
1.3.1 Method: Post

Number of Users: 150

Ramp Up Period: 2 second

Loop Count: 2

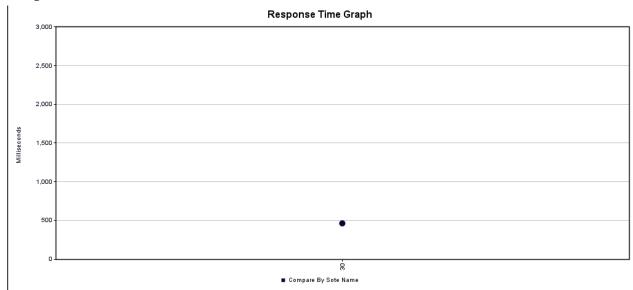
• View By Tree



• View in Table

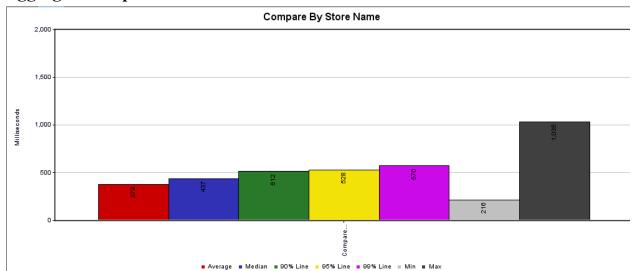
Sample #	Start Time	Thread Name	Label	Sample Time(Status	Bytes	Sent Bytes	Latency	Connect Time(
	18:00:42.072	Users 1-126	Compare By S	255	⊗		225	255	
	18:00:42.069	Users 1-125	Compare By S	258	€		225	258	
	18:00:42.110	Users 1-136	Compare By S		€		225		
284	18:00:42.114	Users 1-138	Compare By S		⊙		225		
	18:00:42.110	Users 1-133	Compare By S		⊙		225		
286	18:00:42.112	Users 1-135	Compare By S	246	⊙		225	246	
	18:00:42.114	Users 1-134	Compare By S	258	⊙		225	258	
	18:00:42.199	Users 1-139	Compare By S		⊙		225		
289	18:00:42.198	Users 1-141	Compare By S		⊙		225		
	18:00:42.199	Users 1-140	Compare By S		⊙		225		
	18:00:42.222	Users 1-144	Compare By S	323	⊙		225	323	
	18:00:42.222	Users 1-142	Compare By S		⊙		225		
	18:00:42.230	Users 1-143	Compare By S		⊙		225	317	
294	18:00:42.199	Users 1-137	Compare By S		⊙				
	18:00:42.257	Users 1-146	Compare By S	299	⊙		225	299	
296	18:00:42.287	Users 1-149	Compare By S		⊙		225		
	18:00:42.257	Users 1-145	Compare By S		⊙		225		
298	18:00:42.287	Users 1-148	Compare By S		€		225		
299	18:00:42.300	Users 1-150	Compare By S		⊙		225	270	
	18:00:42.289	Users 1-147	Compare By S	290	⊙		225		
Scroll automatic	cally? 🔲 Child s	amples?	No of Sample		Latest Sample	290 Ave			

• Response Time

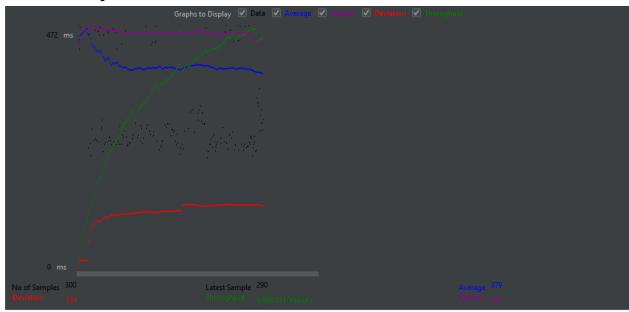


Response Time is 490 ms.

• Aggregate Graph



• Overall Graph



Results:

- Here We have taken a Post method.
- For a given set of samples our website is working very fine.

1.4 Forgot Password:

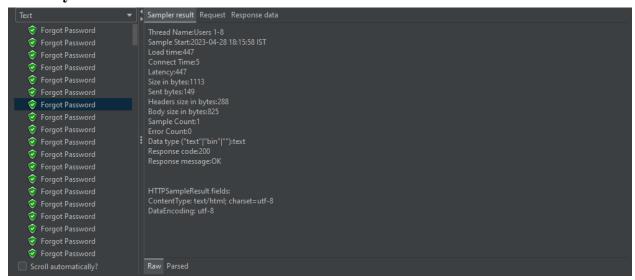
1.4.1 Method: Post

Number of Users: 100

Ramp Up Period: 1 second

Loop Count: 2

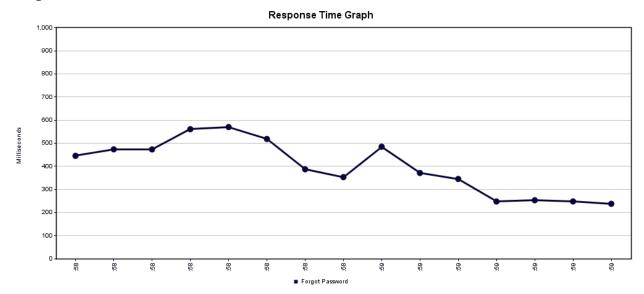
• View By Tree



• View in Table

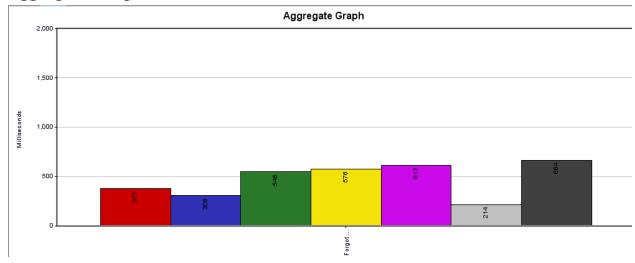
Sample #	Start Time	Thread Name	Label	Sample Time(Status	Bytes	Sent Bytes	Latency	Connect Time(
	18:15:59.579	Users 1-79	Forgot Password	258	©		149	258	
	18:15:59.593	Users 1-86	Forgot Password	244	€		149	244	
	18:15:59.578	Users 1-83	Forgot Password	254	€		149	254	
184	18:15:59.578	Users 1-82	Forgot Password	251	€		149	251	
	18:15:59.616	Users 1-87	Forgot Password		€		149		
	18:15:59.610	Users 1-85	Forgot Password	255	€		149	255	
	18:15:59.606	Users 1-84	Forgot Password	259	€		149	259	
	18:15:59.630	Users 1-88	Forgot Password		€		149		
	18:15:59.659	Users 1-91	Forgot Password		€		149		
	18:15:59.656	Users 1-89	Forgot Password	244	€		149	244	
	18:15:59.689	Users 1-96	Forgot Password	214	€		149	214	
	18:15:59.675	Users 1-90	Forgot Password		€		149		
	18:15:59.688	Users 1-92	Forgot Password		€		149	228	
194	18:15:59.702	Users 1-94	Forgot Password		€		149		
	18:15:59.709	Users 1-93	Forgot Password	252	€		149	252	
196	18:15:59.736	Users 1-97	Forgot Password	225	€		149	225	
	18:15:59.737	Users 1-98	Forgot Password		€		149		
	18:15:59.750	Users 1-100	Forgot Password		€		149	228	
199	18:15:59.750	Users 1-95	Forgot Password	251	€		149	251	
	18:15:59.781	Users 1-99	Forgot Password		€		149		

• Response Time

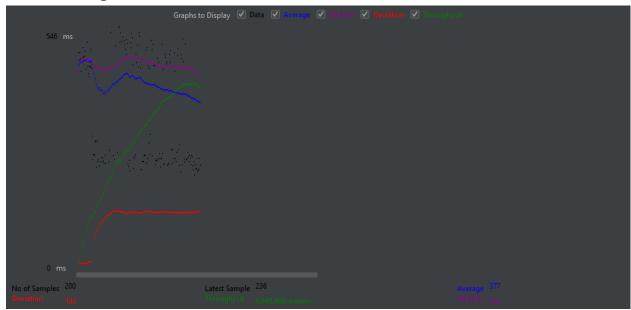


• Average Response Time is 429 ms.

• Aggregate Graph



Overall Graph



Results:

- Here We have taken a Post method.
- For a given set of samples our website is working very fine.

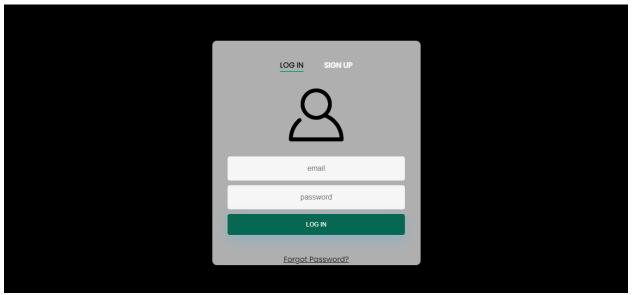
Final Result of Non Functional Testing:

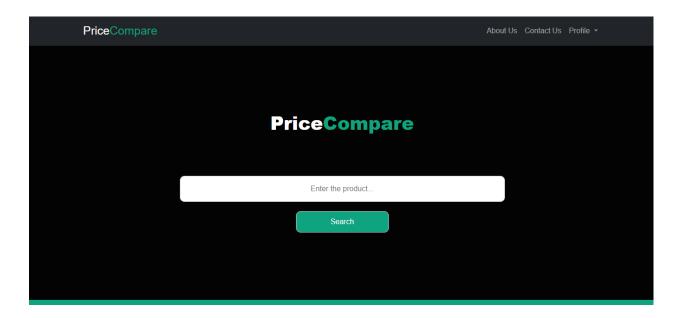
- Non Functional Testing is used to check Performance of the Website and Scalability of the Website.
- I have used an Apache JMeter tool for Performance testing.
- I tested the Root Page of the website and also different APIs of the website.
- In JMeter I took a different number of users, different ramp-up time and different loops to test the Performance of the website and I got results from Tables and Graphs.
- From above testing, I can say that Our Website performance is good based on Performance Testing.

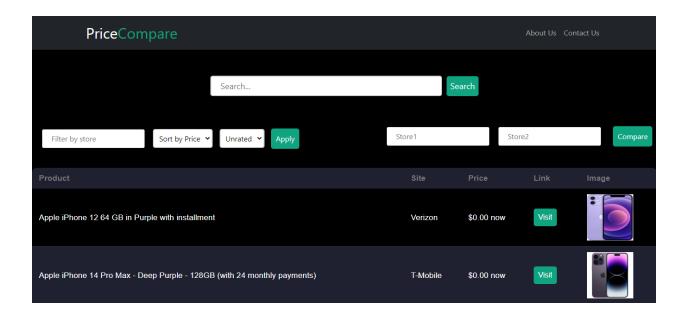
2. Responsiveness Testing

- Responsive testing is critical for ensuring a positive user experience, as more and more people access the web on their mobile devices.
- I have attached pictures of our website, How it looks on Laptop and hoe it looks on Mobile Phone.

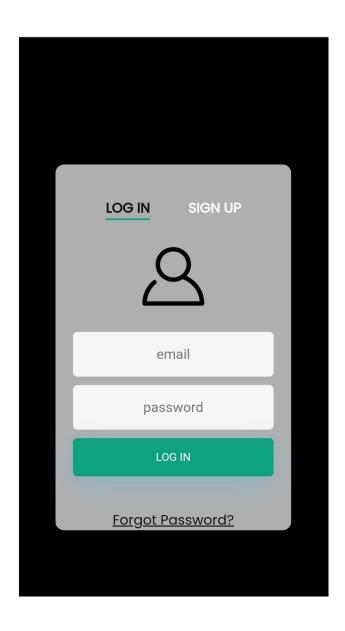
• Screenshots from Laptop:

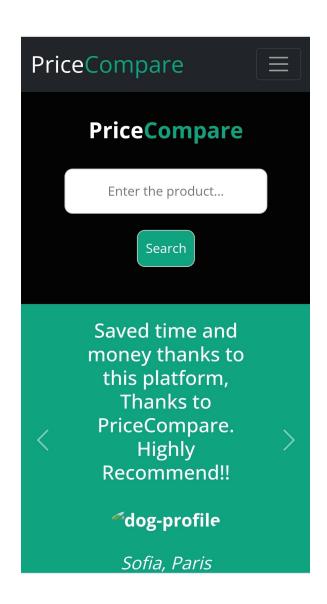


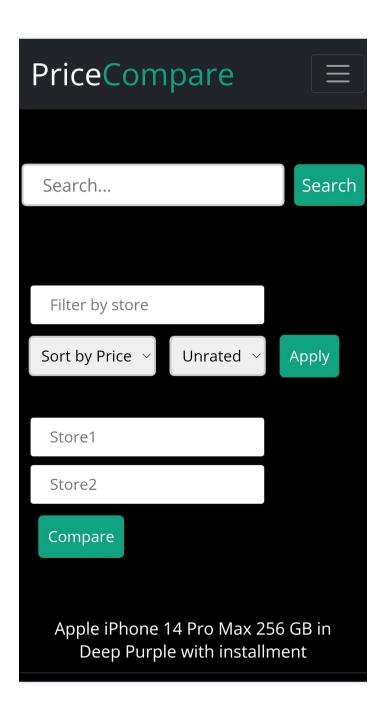


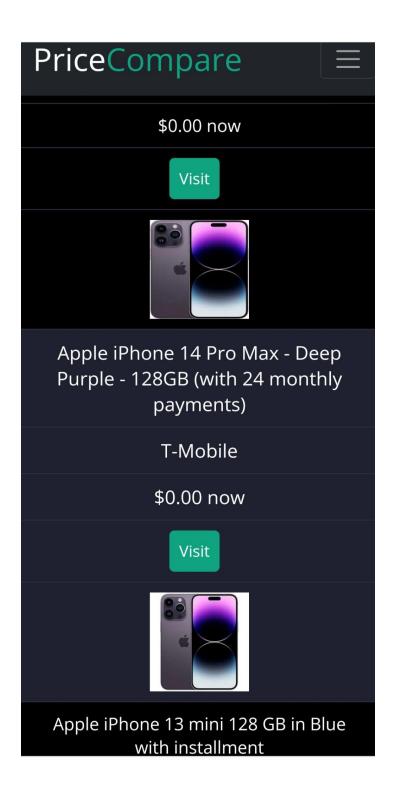


• Screenshot from Mobile Phone:









Result:

• From these Images We can say that our website is Responsive.