Midterm Assignment

Software Verification and validation

Marks: **30**

Deadline:19-April-2020 12:00 pm

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A. Choose any Testing tool from the list, and write downs its
   a) **pros/ cons**
   b) **Functionality**
   c) **Supporting Languages**
   d) **Supporting Tests**
   e) **Write a short (faulty) code, Test using this tool, and show the bugs in the code.**

Load Ninja:

Load Ninja is a cloud based load testing and performance testing platform for web application and web sites. It helps developers QA teams and performance professionals who load test web applications. It makes load testing simple and fast. It is open source.

a) **Pros:**

The following are the pros of Load Ninja:

- It reduces Test Script Creation Time by 60%.
- It generates load with thousand (1000s) of real browser.
- It manages your performance test efficiently
- It tests application in local network.
- It has real-time VU inspector and debugger.

b) **Cons:**

The following are the cons of Load Ninja:
- Unrealistic expectance from the tool.
- Individuals frequently commit errors.
- Individuals oftentimes miscount the time
- People are dependent on the tool a lot.

Functionality:
1. **Create real-life load tests:**

With load Ninja you record user action on the tested web sites then simulate the recorded transaction by using thousands of virtual users. So each virtual user's acts similarly to real users that are where your load tests are close to real life load test.

2. **Use real browsers for real user simulation:**

> Load Ninja plays back the recorded traffic in real browser every virtual user works in their own browser they don't have an effect on one another. Load Ninja simulates user action exactly as well as pauses between actions. If some tested pages run script code on the client side that code is also executed during the process of the test run in the browser.

3. **Create test quickly and easily:**

> Creating UI tests by recording user actions within the browser and you create API tests within the request editor. No coding, downloading or installing browser plugins is required.
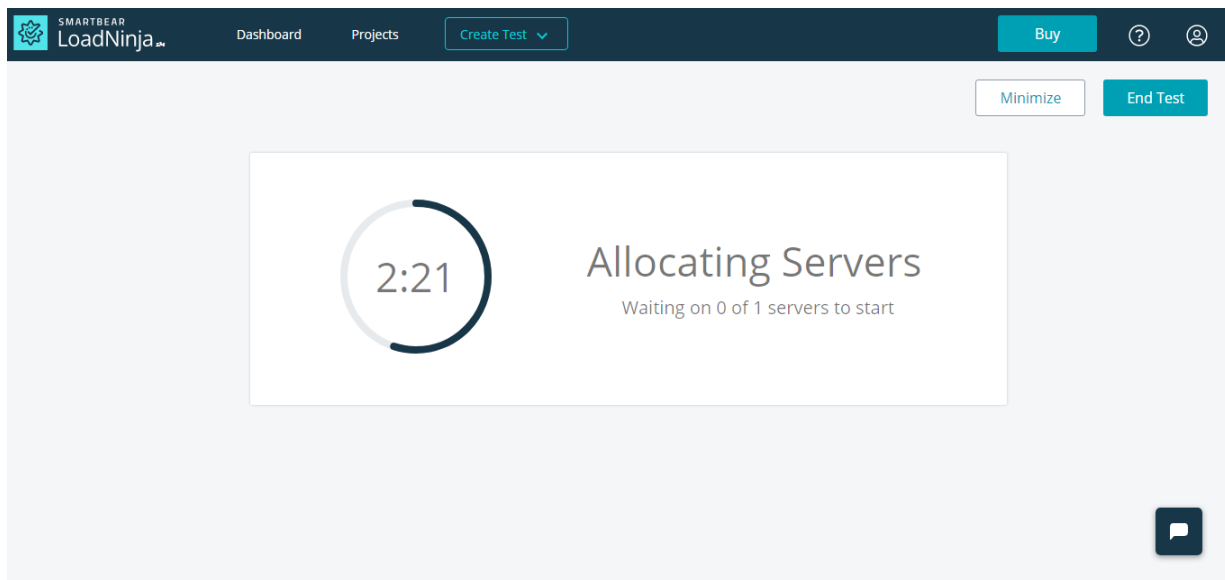
c) **Supporting Languages:**
- Java.
- Java Script.
- C#.
- Python.
- Ruby.

d) **Supporting Tests:**
- Load testing and performance testing of web sites and web application

e) **Test using this tool:** this test run was on INU official site.

Scenario 2
Apr. 16, 2020, 1:18:18 PM - 1:23:37 PM

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4m 2s	10 VUs	Errors: 0.00%	5.47s	46
Total test time	Run out of 10 VUs	on 0/48 steps	Avg. step duration	Avg. iterations per step

SUMMARY | CHARTS | STATISTICS | NETWORK ANALYTICS | ERRORS | LOADGEN HEALTH

Goals

Edit to define the specifc performance parameters tested.

Key Findings

Edit to define the problems discovered and suggested improvements.

Summary per Script

Script	Load Distribution	Total Successful Steps	Total Failed Steps
INUtestrun	100% - US East : 100%	46	0

Scenario Information

Scenario name: Scenario 2
Virtual users configured: 10
Duration configured: 7 minute(s)
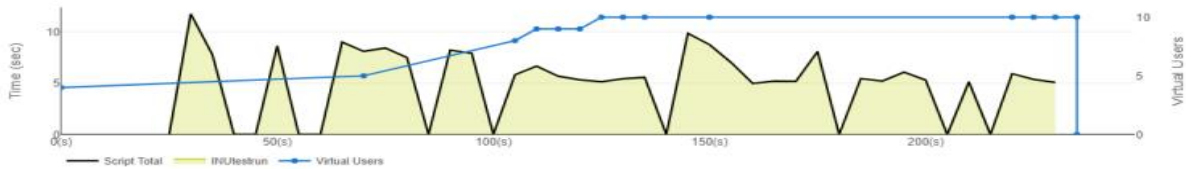Iterations configured: -

Delay between iterations: 30 second(s)
Playback time: as defined in tests
Ramp-up time: 2 minute(s)
Load generation location(s): US East (N. Virginia) 100%

Error handling: debug
Timeout test after: as defined in tests
Ramp-up steps: 10 step(s)
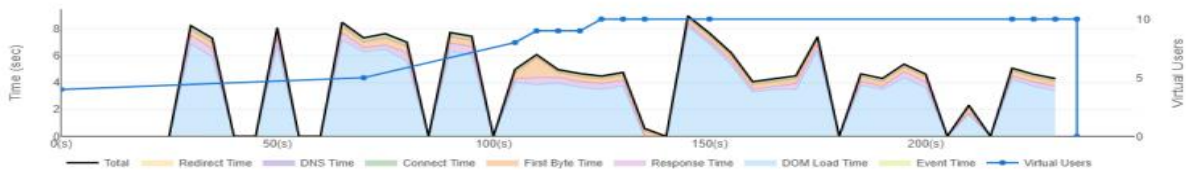Test type: UI

Machine type: standard
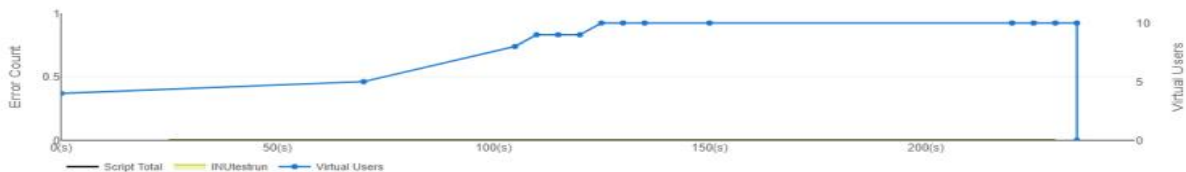
Filter: **All Scripts**

Script and Step Durations

Filter: INUtestrun

Navigation Timings

Filter: **All Scripts**

Error Count

Durations and Errors

Durations and Errors

Script	Last duration(s)	90th percentile duration(s)	95th percentile duration(s)	Average duration(s)	Minimum duration(s)	Maximum duration(s)	Standard deviation (s)	Total Iterations	Total steps	Total failures	Total assertion failures	To timeo
INUtestrun	5.07	11.00	11.74	6.61	4.97	11.74	3.43	45	46	0	0	
Step Name												
1.Student_Info rmation_Cent	4.02	9.24	9.24	5.59	3.94	9.24	3.43	-	46	0	0	

Average Navigation Times

Script	Total time (s)	Think time (s)	Total nav timings (s)	Redirect time (s)	DNS time(s)	Connect time (s)	First byte time (s)	Response time (s)	DOM load time (s)	Event time (s)
INUtestrun	6.61	0.99	5.627	0.000	0.000	0.240	0.428	0.361	4.596	0.000
Step Name										
1.Student_Informatio n_Center	5.59	0.00	5.595	0.000	0.000	0.239	0.426	0.358	4.571	0.000

Time	Script&Steps	URL	ErrorMessage	ActionAvailable
Select filters	Select filters	Select filters	Select filters	Select filters

Time (s)	Script	URL	Step Name	Address	User	Iteration	Response Code	Error Message
			There are no traces available for this test					
								0-0 of 0

The load generator performance data for this test will be retained until Fri May 01 2020. Save this as a PDF report to have a copy of the data shown below.