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Research Paper

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## Performance Testing of On-line Recruitment web application Using JMeter Testing Tool

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**Abstract:** This paper gives idea about the working of JMeter with an online web application, basically how to use JMeter to do the Performance Testing.

**Keywords:** component; Apache JMeter, JDK1.6, Web Application.

### I. INTRODUCTION

Stability and responsiveness is two major terms when we talk about performance. With the help of performance testing, Stability and responsiveness is checked of the application. JMeter is a open source performance testing tool, JMeter is designed to load test functional behavior and measure performance[1]. To test performance on static and dynamic resources, Apache JMeter may be used .Such as files, web dynamic languages-PHP, Java, ASP.NET, Java, Databases and queries, FTP services and more[1].

### II. WORKING WITH JMETER.

Firstly we install the JMeter , click on bin folder, then double click on j meter batch file. We start the JMeter[2].

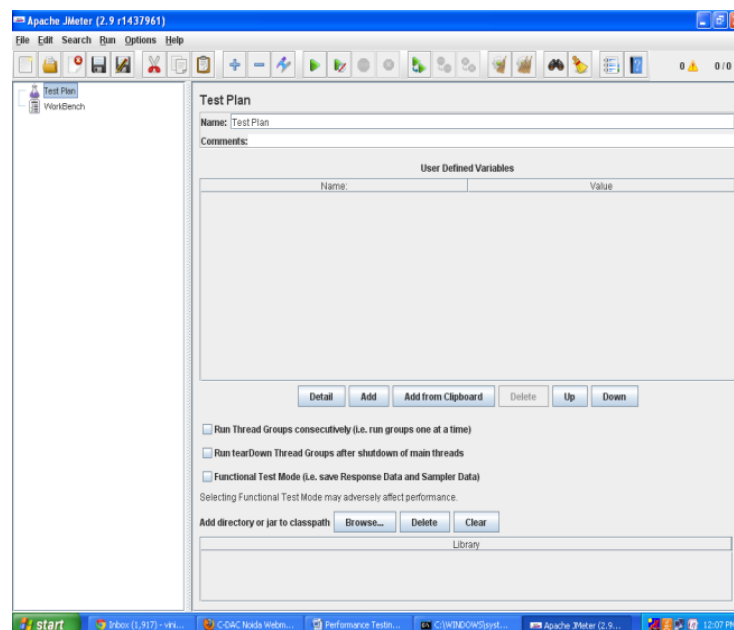
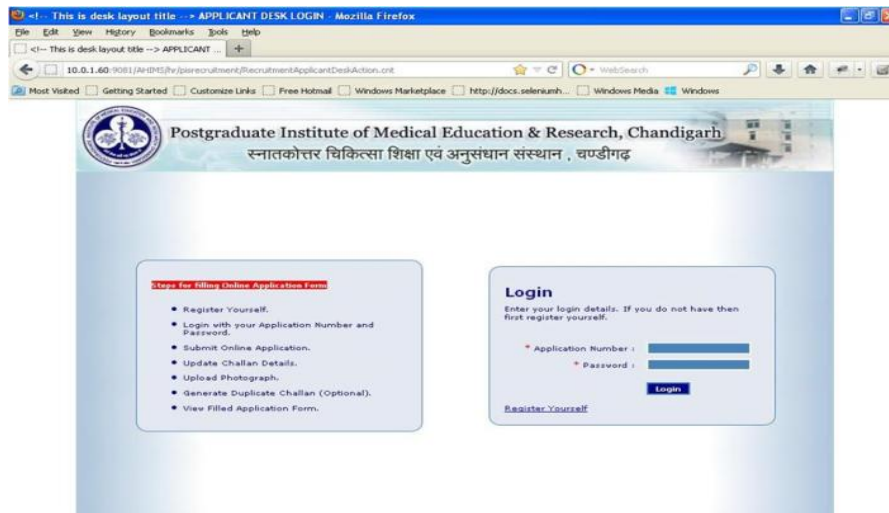


Figure 1:- Apache JMeter start window

## Application Under Test



## STEPS TO RUN THE SCRIPT

1. Right click on Test Plan –Add-Threads-Thread Group
2. Thread Group-Add-Config Element-Http Request Default At this page we enter the following data in given fields
  - a. in server name or IP textbox, we enter the IP address of the web application which we want to run using JMeter, such as 10.0.1.60
  - b. in port number textbox we enter port number like 9081
  - c. in path textbox we enter whole path of the application such as HIMS/hr/pisrecruitment/RecruitmentApplicantDeskAction.cnt
3. Thread Group-Add-Config Element-View Results Tree
4. Workbench-add-non-text Element-HTTP Proxy Server, Click on Http Proxy Server then in port textbox we enter the proxy configuration port number such as 8085 then click on start button
5. Set the proxy of browser by using setting option in tools and enter the url of corresponding web site and do the work which you want to record.

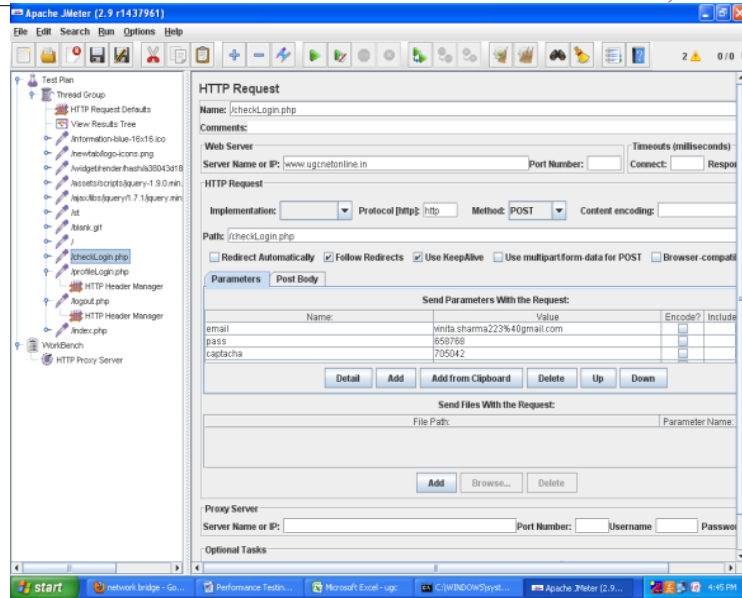


Figure 2: Recorded scripts in Apache JMeter

If we want to login of 100 users at a time then parameterization has to be done. For this enter the variable names instead of the values in the fields that are to be parameterized[3]. This can be enter in the following format:

Suppose the name of an applicant is Vishal, instead of this value we will write `${Applicant_name}` and the variable Applicant\_name is to be entered in the field variable names in the field in CSV Data Set Config.

To make a CSV file enter the parameterized [3] data to an excel sheet and save it with a .csv extension. To add a CSV Data Set Config, we have to press right click on Thread Group –Config Element-CSV Data Set Config. In this, we have to take **care** of three fields i.e. filename, Variable names, and delimiter. Enter the filename same as the csv file we have made earlier. In Variable names field we have to enter all the variables entered during the parameterization [3] is done.

**Graphs generated for running scripts 100 users for registration**

a) This graphs shows active threads over time



Figure 3: Active threads over time

b) This graphs shows bytes throughput over time

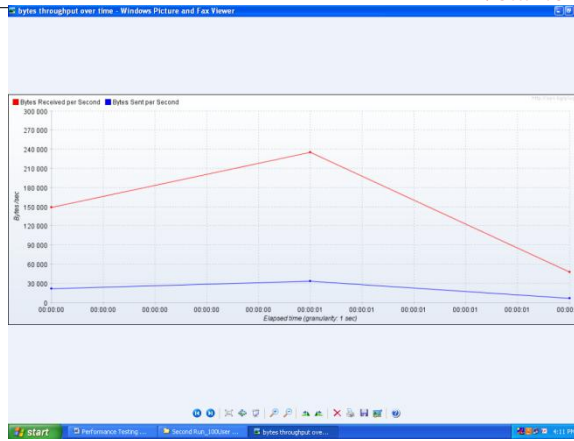


Figure 4: Bytes throughput over time

c) This graphs shows hits per second

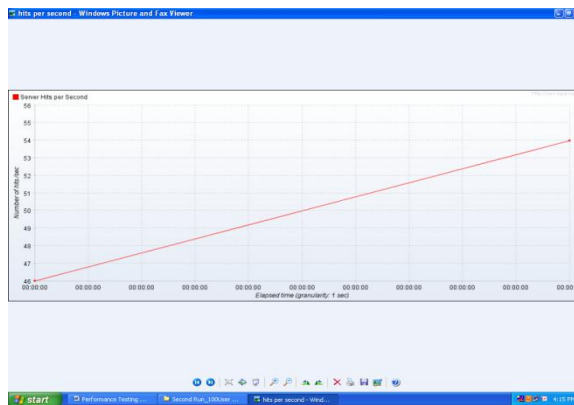


Figure 5: Hits per second

d) This graph shows response time over time



Figure 6: Response time over time

e) This graphs shows transaction throughput v/s thread

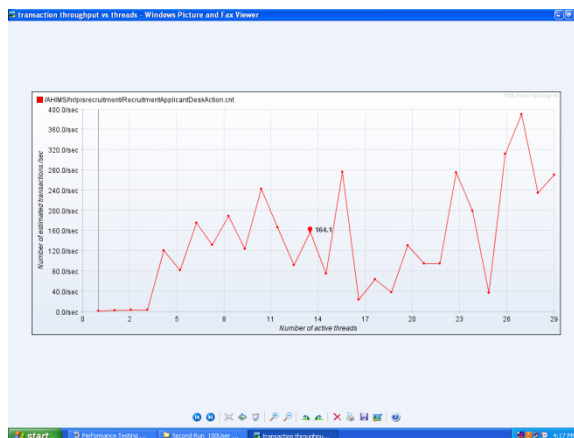


Figure 7: Transaction Throughput v/s Thread

f) This graph shows transaction throughput v/s time



Figure 8: Transaction throughput v/s time

### III. CONCLUSION

With the help of JMeter, the organization is able to improve in following areas:

- Product Quality (e.g. reliability, maintainability, etc)
- Productivity & Decreasing Cycle Time
- Consistency in meeting failover scenario
- Customer Satisfaction

Performance testing is very important factor for any application, JMeter is a good opportunity for performance testing.

### References

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2. [http://www.tutorialspoint.com/jmeter/jmeter\\_quick\\_guide.htm](http://www.tutorialspoint.com/jmeter/jmeter_quick_guide.htm)
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