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**A :- Choose any testing tool from the list, and write down its**

- a) pros/ cons
- b) Functionality
- c) Supporting languages
- d) Supporting test
- e) Write a short (faulty) code, test using this tool, and show the bug in the code.

**Ans :-** I choose load Runner testing tool from the given list.

### **Load Runner**

**LOADRUNNER** is a performance testing tool which was pioneered by mercury

In 1999. Loadrunner was later acquired by HPE in 2006. In 2016, loadrunner

Was acquire by microFocus. Loadrunner support various development tool,

Technologies and communication protocols.

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a) **Pros/cons**: Advantages and disadvantages of **loadrunner**.

→**Pros**:- There are alots of advavntages but some important advantages of loadrunner are given below.

- i) No need to install it on the server Under test. Used native monitor.
- ii) Uses ANSI C as the default Programming language and other language like java and VB.
- iii) Excellent interface where you can see reports in easy to understand having colored char and graphics.

- iv) Make correlation much easier.
- v) Decrease the risk of deploying systems that do not meet performance requirements
- vi) reduce the hardware and software costs by accurately predicting application scalability and capacity.
- vii) supporting of variety of protocols including propriety ones like Citrix, remote, Desktop, Mainframe etc.
- viii) record and replay functionality.

→ **Cons:-** disadvantages of loadrunner are given below.

- i) The only disadvantages I can think is the prohibitive cost associated with the tool but that can also be compensated in the long run when you start getting a good ROI from the tool.
- ii) Protocol is simply a language that your client uses to communicate with the system .
- iii) Correlation is a way to substitute values in dynamic data to enable successful playback.
- iv) Configuration setting are a bit complex
- v) It should also have integration and testing or automation with mobile UI.
- vi) The UI of the software can be improved.
- vii) Licensing cost is very high when we need to perform a test on application for a specific group of users.

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**b) Functionality:**

Micro focus **loadrunner** is one of the most popular load testing software. It is used to test performance of an application under the load. It can simulate thousand of user at same time to produce real time load result.

Load runner simulate user activity by generating messages between application components or simulating interaction with the user interface such as key or mouse movement. The message and interaction to be generated are stored in script. Loadrunner can generate the scripts by recording them, such as logging HTTP requests between a client web browser and an applications web server.

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**c)supporting languages:-** Supporting language of loadrunner is given below.

Load runner are usually created using the ANSI C programming languages.

However java and .Net programming can also be run by Loadrunner. Version 12.50 added the use of javaScript from web-HTTP/HTML script.

Script from other testing tools such as Apache Jmeter, NUnit and Selenium can Be run by load runner by declaring an interface library. Loadrunner scripts can Also be called from within Jenkins.

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**d)Supporting test:-**

Loadrunner 12.55 enable testers to run Apche Jmeter script from controller, Alongside Vuser script can view the results to the loadrunner measurements.

This feature is provided as beta version.

Visual studio and eclipse allowing developer to run unit tests using the load Runner professional engine.

Load runner professional scripts also support execution of Junit, Nunit and Selenium scripts as part of the test scenario, allowing us to leverage unit testing The developer are already creating.

**Load generator** load against application by following scripts.

**Vugun**(virtual user generator) for generating and editing scripts.

**Controller** control, launches and sequences instances of load generator specify Which script to use, for how long etc.

**Agent process** manages connection between controller and load generator Instances.

**Analysis** assemble logs from various load generator and format reports for visualization of run result data and monitoring data.

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**e)Write a short faulty code test using my selected tool(loadrunner) and showing bug as given below:**

Faulty Code:

```
Def my_sqrt(x):
```

```
    NUM_REFINEMENTS = 8
```

```
    Approx = 0.5 * x
```

```
    For i in range (NUM_REFINEMENTS)
```

```
        Better = 0.5 * (approx + x/approx)
```

```
        Approx = better
```

```
    Return better
```

**RESULT:-**

Bug in code is:

File "code.py" , line 8 for i in range(NUM\_REFINEMENTS)

SyntaxError : invalid syntax:

**THE END**

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