**Software Testing Assignment**

**Module-4 Automation Core Testing (Load Runner Up and Selenium IDE)**

Q-1. Which components have you used in Load Runner?

* The key components of load runner
* Load generator generates the load against the application by following scripts.
* Virtual user generator for generating and editing scripts.
* Controller controls launches and sequences instances of load generator specifying which script to use for how long etc.

Q-2. How can you set the number of Virtual users in Load Runner?

* Recording the Virtual user script
* Edit the Virtual user script
* Runtime setting
* Run the Virtual user script in stand alone mode
* Incorporate the Virtual user script into a load runner scenario

Q-3. What is Correlation?

* In applications output of the previous transaction is used as an input for the next transaction.
* For example:
* System generated session ids
* URLs that change each time you access the Web page
* Fields (sometimes hidden) recorded during a form submission

Q-4. What is the process for developing a Virtual user Script?

* You can set number of Virtual user in the controller section while creating your scenario.
* Many other advanced option like ramp-up ramp-down of Virtual user are also available in the controller section.

Q-5. How Load Runner interacts with the application?

* Load runner simulates user activity by generating messages between application components or by simulating interactions with the user interface such as key pressed or mouse movements.
* The message and interactions to be generated are stored in scripts.

Q-6. How many Virtual Users are required for load testing?

* For example if you run a load test with 10,000 Virtual user each making a request every 20 seconds (3 request per minute) then you’re making 30,000 requests per minute which equals 500 requests per second.

Q-7. What is the relationship between Response Time and Throughput?

* Response time and throughput are related
* The response time for an average transaction tends to decrease as you increase overall throughput however you can decrease the response time for a specific query, at the expense of overall throughput, by allocating a disproportionate amount of resources to that query.

Q-8. What is the difference between hits/second and requests/second?

* Hits per second mean the number of hits the server receives in one second from the Virtual user.
* Request per second is the number of requests the Virtual user will request from the server.

Q-9. What is Automation Testing?

* Automation testing is the method of testing software products with special testing tools and frameworks to minimize human intervention and maximize quality.
* Commonly, test automation involves automating a manual process already in place that uses a formalized testing process.
* Although manual tests may find many defects in a software application, it is A laborious and time-consuming process.
* Test automation is a process of writing a computer program to do testing that would otherwise need to be done manually.
* Once tests have been automated, they can be run quickly.
* This is often the most cost-effective method for software products that have a long maintenance life.

Q-10. Which Are The Browsers Supported By Selenium IDE?

* Selenium IDE is chrome browsers and Firefox browsers supported by selenium IDE.

Q-11. What are the benefits of Automation Testing?

* 70% faster than the manual testing
* Wider test coverage of application features
* Reliable in results
* Ensure Consistency
* Saves Time and Cost
* Improves accuracy
* Human Intervention is not required while execution
* Increases Efficiency
* Better speed in executing tests
* Re-usable test scripts
* Test Frequently and thoroughly
* More cycle of execution can be achieved through automation
* Early time to market

Q-12. What are the advantages of Selenium?

* Very easy to use and install.
* No programming experience is required, through knowledge of HTML and DOM are needed.
* Can export tests to formats usable in Selenium RC and WebDriver.
* Has built-in help and test results reporting module
* Provides support for extensions.

Q-13. Why testers should opt for Selenium and not QTP?

* Selenium however support a wide range of programming language. QTP/UFT test scripts run only on the windows environment
* They cannot be run across all browser on the other hand
* Selenium is OS independent and allows test scripts to run across all browsers

Q-14. To validate the tops technologies website Contact us page and enter your friend detail at last “Guest Call Back” <https://www.tops-int.com/contact-us/>?

{

"id": "1966e5be-3a7e-4566-ae56-1863f20acb7a",

"version": "2.0",

"name": "Guest call back",

"url": "https://www.tops-int.com/contact-us",

"tests": [{

"id": "605bd3bf-8a52-4160-a470-1126df3fac84",

"name": "Guest call back",

"commands": [{

"id": "8dad61ed-11b7-46a2-8176-a27c578177bb",

"comment": "",

"command": "open",

"target": "https://www.tops-int.com/contact-us",

"targets": [],

"value": ""

}, {

"id": "95e55c93-be7b-4eeb-83c3-b9fcb6eb382e",

"comment": "",

"command": "setWindowSize",

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"targets": [],

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"id": "a0641e42-5327-4571-91c3-43a958de568f",

"comment": "",

"command": "click",

"target": "css=.nav-link > .fa-solid",

"targets": [

["css=.nav-link > .fa-solid", "css:finder"],

["xpath=//div[@id='navbarNav']/ul/li[6]/a/i", "xpath:idRelative"],

["xpath=//a/i", "xpath:position"]

],

"value": ""

}, {

"id": "9c885b86-837a-44d6-91a8-bda852332624",

"comment": "",

"command": "click",

"target": "linkText=Contact us",

"targets": [

["linkText=Contact us", "linkText"],

["css=.dropdown-menu-end > li:nth-child(4) > .dropdown-item", "css:finder"],

["xpath=//a[contains(text(),'Contact us')]", "xpath:link"],

["xpath=//div[@id='navbarNav']/ul/li[6]/ul/li[4]/a", "xpath:idRelative"],

["xpath=(//a[contains(@href, 'https://www.tops-int.com/contact-us')])[2]", "xpath:href"],

["xpath=//li[6]/ul/li[4]/a", "xpath:position"],

["xpath=//a[contains(.,'Contact us')]", "xpath:innerText"]

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"value": ""

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"id": "4e6491a4-43cf-4f15-ba75-16c57be97ee4",

"comment": "",

"command": "click",

"target": "id=inq\_name",

"targets": [

["id=inq\_name", "id"],

["name=name", "name"],

["css=.px-3 > div #inq\_name", "css:finder"],

["xpath=//input[@id='inq\_name']", "xpath:attributes"],

["xpath=//div[@id='course-page']/section[2]/div/div/div[2]/div/div[2]/div/div/form/input", "xpath:idRelative"],

["xpath=//input", "xpath:position"]

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"value": ""

}, {

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"targets": [

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["name=name", "name"],

["css=.px-3 > div #inq\_name", "css:finder"],

["xpath=//input[@id='inq\_name']", "xpath:attributes"],

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["css=.px-3 > div #inq\_email", "css:finder"],

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["xpath=//input[2]", "xpath:position"]

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["css=.px-3 > div #inq\_email", "css:finder"],

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["xpath=//div[@id='course-page']/section[2]/div/div/div[2]/div/div[2]/div/div/form/input[2]", "xpath:idRelative"],

["xpath=//input[2]", "xpath:position"]

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"value": "nikunjpatel6883@gmail.com"

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["xpath=//input[@id='inq\_contact']", "xpath:attributes"],

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["css=.px-3 > div #inq\_contact", "css:finder"],

["xpath=//input[@id='inq\_contact']", "xpath:attributes"],

["xpath=//div[@id='course-page']/section[2]/div/div/div[2]/div/div[2]/div/div/form/div[2]/input", "xpath:idRelative"],

["xpath=//div[2]/input", "xpath:position"]

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["css=.px-3 > div .btn", "css:finder"],

["xpath=//a[contains(text(),'Send Inquiry')]", "xpath:link"],

["xpath=//a[@type='button']", "xpath:attributes"],

["xpath=//div[@id='course-page']/section[2]/div/div/div[2]/div/div[2]/div/div/form/div[3]/a", "xpath:idRelative"],

["xpath=(//a[contains(@href, 'javascript:;')])[150]", "xpath:href"],

["xpath=//div[3]/a", "xpath:position"],

["xpath=//a[contains(.,'Send Inquiry')]", "xpath:innerText"]

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"value": ""

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"comment": "",

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"target": "linkText=Send Inquiry",

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["css=.px-3 > div .btn", "css:finder"],

["xpath=//a[contains(text(),'Send Inquiry')]", "xpath:link"],

["xpath=//a[@type='button']", "xpath:attributes"],

["xpath=//div[@id='course-page']/section[2]/div/div/div[2]/div/div[2]/div/div/form/div[3]/a", "xpath:idRelative"],

["xpath=(//a[contains(@href, 'javascript:;')])[150]", "xpath:href"],

["xpath=//div[3]/a", "xpath:position"],

["xpath=//a[contains(.,'Send Inquiry')]", "xpath:innerText"]

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"value": ""

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"comment": "",

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"target": "linkText=Send Inquiry",

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["css=.px-3 > div .btn", "css:finder"],

["xpath=//a[contains(text(),'Send Inquiry')]", "xpath:link"],

["xpath=//a[@type='button']", "xpath:attributes"],

["xpath=//div[@id='course-page']/section[2]/div/div/div[2]/div/div[2]/div/div/form/div[3]/a", "xpath:idRelative"],

["xpath=(//a[contains(@href, 'javascript:;')])[150]", "xpath:href"],

["xpath=//div[3]/a", "xpath:position"],

["xpath=//a[contains(.,'Send Inquiry')]", "xpath:innerText"]

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"suites": [{

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"parallel": false,

"timeout": 300,

"tests": ["605bd3bf-8a52-4160-a470-1126df3fac84"]

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"urls": ["https://www.tops-int.com/contact-us"],

"plugins": []

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