

Integrated MCA (SEM-V)

Subject Code: 050120502

Subject Name: Software Engineering and Quality Assurance Practical

Detailed Schedule

Session – 1
(Software testing using selenium)

| | Topics to be covered |
|---|---------------------------|
| 1 | Selenium test environment |
| 2 | Introduction to selenium |
| 3 | Features of selenium |
| 4 | Selenium Limitations |

Essential List (Practical):

| | |
|---|---|
| 1 | Download and install the Java Software Development Kit (JDK) http://www.oracle.com/technetwork/java/javase/downloads/index.html |
| 2 | Download "Eclipse IDE for Java Developers" http://www.eclipse.org/downloads/ |
| 3 | Download web driver compatible with eclipse https://chromedriver.chromium.org/downloads |

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| Session - 2 (Software testing using selenium) | |
|--|-----------------------------|
| | Topics to be covered |
| 1 | Selenium test environment |
| 2 | Introduction to selenium |
| 3 | Features of selenium |
| 4 | Selenium Limitations |

| Essential List (Practical): | |
|------------------------------------|---|
| 1 | Download and install the Java Software Development Kit (JDK) http://www.oracle.com/technetwork/java/javase/downloads/index.html |
| 2 | Download "Eclipse IDE for Java Developers" http://www.eclipse.org/downloads/ |
| 3 | Download web driver compatible with eclipse https://chromedriver.chromium.org/downloads |

| Desirable List (Practical): | |
|------------------------------------|--|
| 1 | Which are other testing tools available in market? |

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| Session - 3 (Software testing using selenium) | |
|--|---|
| | Topics to be covered |
| 1 | Configure eclipse IDE with web driver |
| 2 | Web driver commands: |
| 3 | Get command, Get Title Command, Get Current URL Command |
| 4 | Get Page Source Command, Close Command, Quit Command |

| Essential List (Practical): | |
|------------------------------------|--|
| 1 | Write a selenium code which opens a website and display its title and url. |
| 2 | Write a selenium code which opens a website and display its page source and closes the web page. |

| Desirable List (Practical): | |
|------------------------------------|---|
| 1 | Write a selenium code which opens a website. The code should display its title, url and closes the webpage. |

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| Session - 4 (Software testing using selenium) | |
|--|---|
| | Topics to be covered |
| 1 | Configure eclipse IDE with web driver |
| 2 | Web driver commands |
| 3 | Get command, Get Title Command, Get Current URL Command |
| 4 | Get Page Source Command, Close Command, Quit Command |

| Essential List (Practical): | |
|------------------------------------|--|
| 1 | Write a selenium code which opens a website and display its title and url. |
| 2 | Write a selenium code which opens a website and display its page source and closes the web page. |

| Desirable List (Practical): | |
|------------------------------------|---|
| 1 | Write a selenium code which opens a website. The code should display its title, url and closes the webpage. |

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| Session - 5 | |
|-------------|---|
| | Topics to be covered |
| 1 | Configure eclipse IDE with web driver |
| 2 | Web driver commands |
| 3 | Get command, Get Title Command, Get Current URL Command |
| 4 | Get Page Source Command, Close Command, Quit Command |

| Essential List (Practical): | |
|-----------------------------|--|
| 1 | Write a selenium code which opens a website and display its title and url. |
| 2 | Write a selenium code which opens a website and display its page source and closes the web page. |

| Desirable List (Practical): | |
|-----------------------------|--|
| 1 | Which are other testing tools available in market? |

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| Session - 6 (Software testing using selenium) | |
|--|-------------------------------|
| | Topics to be covered |
| 1 | Navigation Commands: |
| 2 | Navigate to command |
| 3 | Forward command, back command |
| 4 | Refresh command |

| Essential List (Practical): | |
|------------------------------------|---|
| 1 | Write a selenium code to open ljdku website. It should navigate to admission page. |
| 2 | Write a selenium code to open ljdku website. Navigate to home page from admission page. |

| Desirable List (Practical): | |
|------------------------------------|--|
| 1 | Write a selenium code which opens ljdku website and it should navigate to program page and come back to home page. |

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| Session - 7 (Software testing using selenium) | |
|--|-------------------------------|
| | Topics to be covered |
| 1 | Navigation Commands: |
| 2 | Navigate to command |
| 3 | Forward command, back command |
| 4 | Refresh command |

| Essential List (Practical): | |
|------------------------------------|---|
| 1 | Write a selenium code to open ljdku website. It should navigate to admission page. |
| 2 | Write a selenium code to open ljdku website. Navigate to home page from admission page. |

| Desirable List (Practical): | |
|------------------------------------|--|
| 1 | Write a selenium code which opens ljdku website and it should navigate to program page and come back to home page. |

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| Session - 8 (Software testing using selenium) | |
|--|-------------------------------|
| | Topics to be covered |
| 1 | Web elements commands: |
| 2 | Clear, Send keys |
| 3 | Click, Is enabled |
| 4 | Is selected, get text |

| Essential List (Practical): | |
|------------------------------------|--|
| 1 | Write a selenium code to open ljdku website. It should open admission page and fill name, address and contact number via web element commands. |
| 2 | Write a selenium code to open ljdku website. It should open admission page and fill program, course and specialization via web element commands. |

| Desirable List (Practical): | |
|------------------------------------|---|
| 1 | Write a selenium code which opens ljdku website and it should open admission page and fill the details via web elements commands. |

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| Session - 9 (Software testing using selenium) | |
|--|-------------------------------|
| | Topics to be covered |
| 1 | Web elements commands: |
| 2 | Get text, get tag name |
| 3 | Get attribute, get size |
| 4 | Get Location |

| Essential List (Practical): | |
|------------------------------------|--|
| 1 | Write a selenium code to open ljdku website. It should open admission page and fill name, address and contact number via web element commands. |
| 2 | Write a selenium code to open ljdku website. It should open admission page and fill program, course and specialization via web element commands. |

| Desirable List (Practical): | |
|------------------------------------|---|
| 1 | Write a selenium code which opens ljdku website and it should open admission page and fill the details via web elements commands. |

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| Session - 10 (Software testing using selenium) | |
|---|--|
| | Topics to be covered |
| 1 | Find Element and Find Elements commands: |
| 2 | Difference between find element and find elements commands |
| 3 | Find by id, name |
| 4 | Find by CSS class and xpath |

| Essential List (Practical): | |
|------------------------------------|---|
| 1 | Write a selenium code to open ljdku website. It should open admission page and fill name, address and contact number via web element commands. |
| 2 | Write a selenium code to open ljdku website. It should open admission page and fill program, course, and specialization via web element commands. |

| Desirable List (Practical): | |
|------------------------------------|---|
| 1 | Write a selenium code which opens ljdku website and it should open admission page and fill the details via web elements commands. |

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| Session - 11 (Software testing using selenium) | |
|---|--|
| | Topics to be covered |
| 1 | Find Element and Find Elements commands: |
| 2 | Difference between find element and find elements commands |
| 3 | Find by id, name |
| 4 | Find by CSS class and xpath |

| Essential List (Practical): | |
|------------------------------------|--|
| 1 | Write a selenium code to open ljdku website. It should open admission page and fill name, address and contact number via web element commands. |
| 2 | Write a selenium code to open ljdku website. It should open admission page and fill program, course and specialization via web element commands. |

| Desirable List (Practical): | |
|------------------------------------|---|
| 1 | Write a selenium code which opens ljdku website and it should open admission page and fill the details via web elements commands. |

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| Session – 12 (Software testing using selenium) | |
|---|--|
| | Topics to be covered |
| 1 | Find Element and Find Elements commands: |
| 2 | Find web element by class id |
| 3 | Find web element by class id |
| 4 | Checkbox selection |

| Essential List (Practical): | |
|-----------------------------|--|
| 1 | Write a selenium code to open ljdku website. It should open admission page and fill name, address and contact number via web element commands. |
| 2 | Write a selenium code to open ljdku website. It should open admission page and fill program, course and specialization via web element commands. |

| Desirable List (Practical): | |
|-----------------------------|---|
| 1 | Write a selenium code which opens ljdku website and it should open admission page and fill the details via web elements commands. |

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| Session - 13 (Software testing using selenium) | |
|---|---|
| | Topics to be covered |
| 1 | Dynamic web tables |
| 2 | Dynamic web tables by get text |
| 3 | Dynamic web tables by get attribute |
| 4 | Dynamic web tables by xpath, radio button selection |

| Essential List (Practical): | |
|------------------------------------|--|
| 1 | Write a selenium code to open ljdku website. It should open admission page and fill name, address and contact number via web element commands. |
| 2 | Write a selenium code to open ljdku website. It should open admission page and fill program, course and specialization via web element commands. |

| Desirable List (Practical): | |
|------------------------------------|---|
| 1 | Write a selenium code which opens ljdku website and it should open admission page and fill the details via web elements commands. |

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| Session - 14 (Software testing using selenium) | |
|---|------------------------------|
| | Topics to be covered |
| 1 | Synchronization: |
| 2 | Implicit wait, Explicit wait |
| 3 | Page load time |
| 4 | Expected condition class |

| Essential List (Practical): | |
|------------------------------------|---|
| 1 | Write a selenium code which opens ljdku website. The script should display the window size. |
| 2 | Write a selenium code which opens ljdku website. The script should set the new window size and display appropriate output on console. |

| Desirable List (Practical): | |
|------------------------------------|--|
| 1 | Write a selenium code which opens ljdku website. The script should display existing window size, set new window size via synchronization and window handling commands. |

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| Session - 15 (Software testing using selenium) | |
|---|-----------------------------|
| | Topics to be covered |
| 1 | Window handling: |
| 2 | Size |
| 3 | Position |
| 4 | Handles, Switch to |

| Essential List (Practical): | |
|------------------------------------|---|
| 1 | Write a selenium code which opens ljdku website. The script should display the window size. |
| 2 | Write a selenium code which opens ljdku website. The script should set the new window size and display appropriate output on console. |

| Desirable List (Practical): | |
|------------------------------------|--|
| 1 | Write a selenium code which opens ljdku website. The script should display existing window size, set new window size via synchronization and window handling commands. |

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| Session - 16 (Software testing using selenium) | |
|---|---|
| | Topics to be covered |
| 1 | Concept of screenshot: |
| 2 | Takes screenshot |
| 3 | Browser profile |
| 4 | Set preferred language, changing user agents, enable extensions |

| Essential List (Practical): | |
|------------------------------------|---|
| 1 | Write a selenium code which finds an element by frame tag. Display the output on console. |
| 2 | Write a selenium code which takes the screen shot of website and store it on a particular location. |

| Desirable List (Practical): | |
|------------------------------------|--|
| 1 | Write a selenium code which finds an element by frame tag. Take the screenshot of current website and store it on a particular location. |

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| Session - 17 (Software testing using selenium) | |
|---|---|
| | Topics to be covered |
| 1 | Concept of screenshot: |
| 2 | Takes screenshot |
| 3 | Browser profile |
| 4 | Set preferred language, changing user agents, enable extensions |

| Essential List (Practical): | |
|------------------------------------|---|
| 1 | Write a selenium code which finds an element by frame tag. Display the output on console. |
| 2 | Write a selenium code which takes the screen shot of website and store it on a particular location. |

| Desirable List (Practical): | |
|------------------------------------|--|
| 1 | Write a selenium code which finds an element by frame tag. Take the screenshot of current website and store it on a particular location. |

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| Session - 18 (Software testing using selenium) | |
|---|---|
| | Topics to be covered |
| 1 | Cookies: creating, reading, deleting |
| 2 | Get cookie, get cookie named, Add cookie |
| 3 | Delete cookie, delete cookie named |
| 4 | Delete all cookies |

| Essential List (Practical): | |
|------------------------------------|--|
| 1 | Write a selenium code which creates cookie and display its name. |
| 2 | Write a selenium code which displays existing cookie on console. |

| Desirable List (Practical): | |
|------------------------------------|--|
| 1 | Write a selenium code which displays existing cookie on console, create new cookie, display into cookie list and delete recently created cookie. |

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| Session - 19 (Software testing using selenium) | |
|---|---|
| | Topics to be covered |
| 1 | Cookies: creating, reading, deleting |
| 2 | Get cookie, get cookie named, Add cookie |
| 3 | Delete cookie, delete cookie named |
| 4 | Delete all cookies |

| Essential List (Practical): | |
|------------------------------------|--|
| 1 | Write a selenium code which creates cookie and display its name. |
| 2 | Write a selenium code which displays existing cookie on console. |

| Desirable List (Practical): | |
|------------------------------------|--|
| 1 | Write a selenium code which displays existing cookie on console, create new cookie, display into cookie list and delete recently created cookie. |

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| Session - 20 (Software testing using selenium) | |
|---|-----------------------------|
| | Topics to be covered |
| 1 | Data driven testing: |
| 2 | Excel data |
| 3 | Data retrieval |
| 4 | File input stream |

| Essential List (Practical): | |
|------------------------------------|--|
| 1 | Write a selenium code which retrieves excel data from an excel file and make it as input for a form. |

| Desirable List (Practical): | |
|------------------------------------|---|
| 1 | Write a selenium code which retrieves data from an excel file. Make this data as input in a form and perform necessary actions. |

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| Session - 21 (Software testing using selenium) | |
|---|-----------------------------|
| | Topics to be covered |
| 1 | Data driven testing: |
| 2 | Excel data |
| 3 | Data retrieval |
| 4 | File input stream |

| Essential List (Practical): | |
|------------------------------------|--|
| 1 | Write a selenium code which retrieves excel data from an excel file and make it as input for a form. |

| Desirable List (Practical): | |
|------------------------------------|---|
| 1 | Write a selenium code which retrieves data from an excel file. Make this data as input in a form and perform necessary actions. |

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| Session - 22 (Software testing using selenium) | |
|---|--|
| | Topics to be covered |
| 1 | Page object Model: |
| 2 | Benefits of Page object model: Object repository |
| 3 | Reuse code, reduce duplication |
| 4 | Implementation of page object model |

| Essential List (Practical): | |
|------------------------------------|---|
| 1 | Write a selenium code which use multiple pages as an object and display appropriate output. |

| Desirable List (Practical): | |
|------------------------------------|---|
| 1 | Use different web elements of ljdku web site to write the code for page object model. Display appropriate output. |

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| Session - 23 (Software testing using selenium) | |
|---|--|
| | Topics to be covered |
| 1 | Page object Model: |
| 2 | Benefits of Page object model: Object repository |
| 3 | Reuse code, reduce duplication |
| 4 | Implementation of page object model |

| Essential List (Practical): | |
|------------------------------------|---|
| 1 | Write a selenium code which use multiple pages as an object and display appropriate output. |

| Desirable List (Practical): | |
|------------------------------------|---|
| 1 | Use different web elements of ljdku web site to write the code for page object model. Display appropriate output. |



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| Session - 24 (Software testing using selenium) | |
|---|----------------------|
| | Topics to be covered |
| 1 | Revision |
| 2 | Revision |
| 3 | Doubt solving |
| 4 | Doubt solving |

| Essential List (Practical): | |
|-----------------------------|----------------------|
| 1 | Revision of programs |

| Desirable List (Practical): | |
|-----------------------------|----------------------|
| 1 | Revision of programs |