



SHORT-TERM INTERNSHIP



**Dr. LANKAPALLI BULLAYYA COLLEGE
VISAKHAPATNAM**

An Internship Report on

SOFTWARE AUTOMATION TESTING

Submitted in accordance with the requirement for the degree of

B.Sc Computers

Under the Faculty Guideship of

Department of

Management [U.G.]

Dr Lankapalli Bullayya College: Visakhapatnam

Submitted by

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Finally I would like to thank my institute faculty of software automation, LBC for making this experience of internship programme. The learning from this experience has been immense and could be cherished throughout life.

WEEKLY REPORT

WEEK - 1 (From Dt..... to Dt.....)

Objective of the Activity Done: Software automation testing concepts

Detailed Report: In this week we had online classes where we learn to various concepts of software automation testing. We learnt about software development life cycle, basics of software testing, various techniques like black box testing, white box testing, module testing, unit testing, static & dynamic testing, acceptance testing, system testing, smoke testing, safety testing and levels of software testing.

2nd
ACTIVITY LOG FOR THE FIRST WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Revision of system & Acceptance testing types of requirements for test case.	Load, stress, Spike, Volume, Regression, Recovery, Migration, functional Hard/software testing	
Day - 2	Advanced testing strategies.	Formal testing & Informal testing test plan software testing life cycle	
Day - 3	Advanced testing strategies	Monkey, gina testing, ad-hoc testing Re-testing & Regression testing	
Day - 4	User Interface and non-functional testing	User interface usability testing. Compatibility Non-functional testing	
Day - 5	Performance testing, Security testing Compatibility testing	Compatibility testing, performance testing & security testing.	
Day - 6	Software testing life cycle and tools.	Globalization, Localization, Recovery testing SPC, test plan.	

WEEKLY REPORT

WEEK - 2 (From Dt..... to Dt.....)

Objective of the Activity Done: Software automation testing concept

Detailed Report: In this week we learnt about other testing technique. First we had a revision of previous concepts. Then we listened the classes of various testing techniques like load, stress, volume, regression, recovery, migration, functional testing. We also learned other advanced testing techniques. Like formal & informal testing, monkey, gorilla, ad-hoc testing, smoke testing and regression testing, usability, compatibility and non-functional, performance, security. testing is also explained.

3rd
ACTIVITY LOG FOR THE FIRST WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Software testing life cycle and tools (STLC)	Test Analysis Analysing or SRSC FRS test Design.	
Day - 2	Software testing life cycle (STLC) and tools	Preparing test scenarios. Preparing test cases Preparing test data.	
Day - 3	Software testing life cycle (STLC) & tools.	Requirements (RTH) • Test case execution • Defect Reporting.	
Day - 4	Software testing life cycle and tools.	Defect severity Defect priority with examples.	
Day - 5	Software testing life cycle and tools.	Defect management tools: JIRA & BUGZILLA Bug life cycle.	
Day - 6	Software testing life cycle and tools.	Detailed Learning on test cases.	

WEEKLY REPORT

WEEK - 3 (From Dt..... to Dt.....)

Objective of the Activity Done:

Software automation testing concepts.

Detailed Report:

In this week we learned about test analysis, analyzing SRS and FRS documents preparation of preparation test cases, execution, preparation of test data, RTM, test case re-execution. Defect reporting, severity and priority is explained. They also taught us about defect management tools and explained about test cases in detail.

4th
ACTIVITY LOG FOR THE FIRST WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Testcase preparation test scenario preparation.	Preparation of test case in excel test scenario preparation.	
Day - 2	Revision of earlier classes	Defect Severity Priority and supporting, Automation testing	
Day - 3	Fundamentals of test Automation.	Introduction; Advantages, disadvantages, types of automation test	
Day - 4	Fundamentals of test Automation	Classification of Automation testing Automation tools.	
Day - 5	Installation & set up of Katalon	Describe how to set up Katalon & understand its features.	
Day - 6	Understanding & learning about the Katalon	Creation of test cases of Katalon.	

WEEKLY REPORT

WEEK - 1 (From Dt. to Dt.)

Objective of the Activity Done: Software automation testing concept.

Detailed Report: In this week we learned about Preparation of test case in excel test scenario preparation, defect severity, priority testing, setup and automation testing. and also we learned about fundamental of test automation, introduction like Advantages, disadvantages of automation test and classification of Automation testing, Automation tools. we also learned Creation of test cases of Katalon Studio.

5th
ACTIVITY LOG FOR THE FIRST WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Creation of test cases and running of test cases.	Record and play back mode & manual mode.	
Day - 2	Creation and running of test cases.	Script mode and manual mode.	
Day - 3	Revision of previous classes and class on locators.	Absolute path & Relative path	
Day - 4	Test Suit Creation & execution & Test suit collection level.	Test suit creation & execution & test suit creation level.	
Day - 5	Data Driven testing	Using internal data, excel.	
Day - 6	Test listeners.	Test listeners creation & execution.	

WEEKLY REPORT

WEEK - 5 (From Dt..... to Dt.....)

Objective of the Activity Done:

Software automation testing concepts.

Detailed Report:

In this week we learned about creation of test cases, running of test cases, record, playback, manual mode, Script mode and manual mode. Revision of previous classes and class in locator, Absolute path, Relative path, test suite creation and also execution test suite collection level. We also learned about test suite creation level, using internal data, excel, test listeners creation & execution.

6th
ACTIVITY LOG FOR THE FIRST WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Revision of previous classes on global & local variables.	classes on global and local variables.	
Day - 2	key words, check points.	creation and execution of key words & check points.	
Day - 3	Installation & Login of Git hub	Installation & login of git hub	
Day - 4	Git - hub uploading and creation of repositories.	Repository creation & cloning, committing on git - hub.	
Day - 5	Installation and set up of JENKINS Integration in Jenkins.	Installation & set up of Jenkins.	
Day - 6	Revision.	Revision.	

WEEKLY REPORT

WEEK - 6 (From Dt..... to Dt.....)

Objective of the Activity Done: Software automation testing concepts

Detailed Report: In this week we learned about classes on global, local variable, keywords, check points, creation, execution of keywords, check points & creation, IntelliJ Installation & logic of Github, and we also learned about separating creation, cloning committing on Github, Installation and set up of Jenkins, revision on these all are we to be learned detail.

7th ACTIVITY LOG FOR THE FIRST WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Assign of project work and creation of team members.	Assignment of project work.	
Day - 2	Understanding and researching on how to do project.	Gathering of information & understanding of requirements.	
Day - 3	Assigning tasks between team members.	Assigning tasks between team members.	
Day - 4	Preparation of test cases and test scenarios - excel.	Preparation of test cases in excel.	
Day - 5	Preparation of test plan in word.	Preparation of test plan in word.	
Day - 6	Creation of test cases in katalon.	Creation of test cases in katalon.	

Done

WEEKLY REPORT

WEEK -7 (From Dt..... to Dt.....)

Objective of the Activity Done:

Software automation testing concepts.

Detailed Report:

In this week we learned about assignment of project work, gathering of information, understanding of requirements, assigning tasks between team members, preparation of test cases in excel. and also preparation of test plan in word. we also learned about creation of test cases in katalon.

8th
ACTIVITY LOG FOR THE FIRST WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Creation of test cases in Katalon & test suites.	Creation of test cases in Katalon & test suites.	
Day - 2	Data driven test and test listeners.	Data driven test and test listeners.	
Day - 3	Verification of project & uploading in Git-hub.	Verification of project.	
Day - 4	Verification of project & uploading in Git-hub.	Verification of project.	
Day - 5	Verification of project & uploading in Git-hub.	Verification of project.	
Day - 6	Verification of project & uploading in Git-hub.	Verification of project.	

WEEKLY REPORT

WEEK - 8 (From Dt..... to Dt.....)

Objective of the Activity Done: Software automation testing concepts.

Detailed Report: In this week we learned about regression testing is a type of software testing that ensure that new code enhances the changes have not adversely effected the existing functionality of the software. It involves re-running previously conducted tests to verify that the software still perform as expected after updates, such as bug fixes, enhancements or other modifications. The goal is to detect unintended side effects or issues introduced the recent changes.

It is crucial to have a comprehensive suite of test cases to cover different aspects of the software, application remains stable and functional.

CHAPTER 6: OUTCOMES DESCRIPTION

Describe the work environment you have experienced (in terms of people interactions, facilities available and maintenance, clarity of job roles, protocols, procedures, processes, discipline, time management, harmonious relationships, socialization, mutual support and teamwork, motivation, space and ventilation, etc.)

In software automation testing, the work environment typically includes:

Workplace settings:- Testers may work in traditional office environments, tech startups, or fully remote setups. Offices often feature cubicles or open spaces, while remote setups require a home office with appropriate tech & communication tools.

Collaborative Atmosphere:- The role often involves frequent interactions with developers, QA teams, project managers and sometimes clients. Collaboration tools like Slack, Microsoft and Zoom.

Technical workspace:- Testers use development tools such as Integrated Development Environments and test management tools. They also work with automation frameworks and CI/CD tools to streamline test processes.

Continuous testing Environment:- The work involves integrating automated tests into CI/CD pipelines to ensure that tests are run continuously as part of the development process.

Dynamic and iterative tasks:- The environment is often dynamic, with tasks varying from creating and maintaining test script to analyzing test results & debugging failures.

Problem-solving focus:- Testers frequently trouble shoot and debug issues in both the test scripts and the application being tested. This involves working with logs, debugging tools, and performance monitoring tools.

Documentation and Reporting:- A significant part of the job involves documenting test cases, results, and defects. Testers use tools like JIRA or TestRail to track progress and report findings.

Regular Meetings:- Teams often have regular stand-ups, sprint planning sessions, and retrospectives to discuss progress, challenges, and future testing needs.

Overall, the work environment in software automation testing is characterized by a blend of technical tasks, collaboration, continuous improvement, and adaptability to ensure the quality and reliability of software products.

Describe the real time technical skills you have acquired (in terms of the job- related skills and hands on experience)

In real-time software automation testing, professionals acquire several key technical skills:

1. **Programming and scripting**:- Proficiency in programming languages (eg. java, python, c++) to develop and maintain automated test scripts.
2. **Test Automation tools**:- Expertise in tools like Selenium, QTP/UFT, or Test Complete for creating & executing automated tests.
3. **Continuous Integration/Continuous Deployment (CI/CD)**:- Familiarity with CI/CD tools like Jenkins, Gitlab CI, or Travis CI to integrate automated tests into the development pipeline and ensure continuous quality.
4. **Version Control Systems**:- Skills in using Git or SVN for managing test scripts, tracking changes and collaborating with other team members.
5. **Test frameworks**:- Knowledge of frameworks such as JUnit, TestNG, or Cucumber for structuring and running tests in an organized manner.
6. **API Testing**:- Experience with tools like Postman, REST Assured, or SoapUI for testing and validating APIs.

Performance Testing:- Understanding of Performance testing tools like JMeter or LoadRunner to assess and optimize application performance under various conditions.

Debugging and Troubleshooting:- Ability to identify, analyse and resolve issues within test scripts and the application being tested.

Database Testing:- Skills in SQL to verify data integrity and interactions between the application and the database.

Test Management:- Proficiency in test management tools such as JIRA, TestRail or Zephyr for tracking test cases, managing test execution, and reporting results.

These skills enable effective automation of testing processes, leading to more reliable and efficient software development and delivery.

Describe the managerial skills you have acquired (in terms of planning, leadership, team work, behaviour, workmanship, productive use of time, weekly improvement in competencies, goal setting, decision making, performance analysis, etc.)

In software automation testing, managerial skills involve overseeing various aspects of the testing process and team dynamics. Key managerial skills include:

Project management:- Ability to plan, execute, and monitor testing projects, including setting timelines, managing resources, and ensuring that testing milestones align with project goals.

Team Leadership:- Leading and motivating a team of testers, managing their workloads, providing their workloads, providing guidance and fostering a collaborative and productive work environment.

Resource Allocation:- Efficiently allocating tasks and resources, including assigning test cases, managing testing environments, and ensuring the availability of necessary tools and infrastructure.

Stakeholder Communication:- Effectively communicating with stakeholders, including developers, product managers and executives, to report on test progress, raise issues and provide feedback.

Risk management:- Identifying potential risks in the testing process, such as resources constraints

or technical challenges and development and developing strategies to mitigate them.

Process Improvement: Continuously evaluating and improving testing processes and methodologies to enhance efficiency, effectiveness, and coverage.

Budget management: Managing the budget allocated for testing activities, including tools licenses, training, and personnel costs, while ensuring cost-effectiveness.

Training and Development: Providing training and development opportunities for the testing team to keep them updated with the latest tools, techniques, and best practices.

Conflict Resolution: Handling conflicts and challenges within the team and with other departments, ensuring that issues are resolved in a constructive and timely manner.

These managerial skills help ensure that the automation testing process runs smoothly, aligns with project objectives, and contributes effectively to the overall quality assurance strategy.

Describe how you could improve your communication skills (in terms of improvement in oral communication, written communication, conversational abilities, confidence levels while communicating, anxiety management, understanding others, getting understood by others, extempore speech, ability to articulate the key points, closing the conversation, maintaining niceties and protocols, greeting, thanking and appreciating others, etc.,)

To improve communication skills in software automation testing, focus on the following strategies:

Clarify objectives:- clearly defined the goals and scope of your communication. Whether it's a test plan, a status update, or a bug report, ensure that the purpose is well-articulated and understood by all parties involved.

Enhance Documentation:- Write clear, concise and organized test cases, plans, and reports. Use a standardized format to make documentation format to make documentation easy to follow and reference. Include necessary details and context to avoid ambiguity.

Use visuals:- Incorporate diagrams, charts and screenshots in reports and presentations. Visual aids can help convey complex information more clearly and are especially useful for illustrating issues or results. **Provide regular updates:-** Keep stakeholders informed with regular progress reports.

Foster Active Listening:- Practice active listening in meetings and discussions. Pay attention to feedback and questions, and respond thoughtfully. Summarize key points of what others have said to confirm understanding.

Simplify Technical Jargon:- When communicating with non-technical stakeholders, avoid using technical jargon or complex terminology.

Prepare for Meetings:- Prepare an agenda for meetings and share it in advance. Ensure that meetings are structured and focused on key topics.

Encourage Feedback:- Actively seek feedback on your communication from colleagues and stakeholders. Use this feedback to make improvements and adapt your communication style as needed.

Leverage Collaboration Tools:- Utilize collaboration tools effectively to facilitate communication. Tools like Slack, Microsoft Teams, or JIRA can help streamline discussions and track issues more efficiently.

By implementing these strategies you can improve your communication skills, leading to better collaboration, more effective problem-solving and a more efficient testing process.

Describe how could you could enhance your abilities in group discussions, participation in teams, contribution as a team member, leading a team/activity.

To enhance abilities in group discussions, team participation, and leadership within the context of software automation testing, consider implementing the following strategies and practices.

Group Discussion :-

- **Preparation:-** Review relevant materials, such as test plans, results, and issues, before discussions. Be ready to contribute informed insights.
- **Effective Communication:-** Practice clear and concise communication. Tailor your message to the audience, avoiding unnecessary technical jargon when speaking with non-technical team members.
- **Active Listening:-** Listen carefully to others' points of view. Acknowledge their contributions and ask clarifying questions to ensure mutual understanding.

Team participation :-

- **collaboration:-** Actively engage in team activities, offering support and feedback. Share knowledge and resources to help achieve common goals.
- **Responsiveness:-** Be prompt in responding to communications and requests. Keep your team updated on your progress and any issues that may arise.

Leadership :-

- **Vision and Goals**:- Clearly define the vision and goals for the automation testing efforts. Ensure the team understands how their work contributes to the overall objectives.
- **Mentorship**:- Guide and support team members in their professional development. Share your expertise in automation tools and best practices.
- **Decision-Making**:- Make informed decisions based on data and team input. Be transparent about the reasoning behind your decisions and involves the team when appropriate.
- **Motivation and Recognition**:- Recognize and reward the achievements and contributions of team members. Encourage a culture of appreciation and motivation.
- **Adaptability**:- Be flexible and open to change. Adapt leadership strategies and project plans based on evolving needs and feedback from the team.

By incorporating these strategies you can enhance your effectiveness in group discussions, improve your participation in teams, and strengthen your leadership skills in the context of software automation testing.

Describe the technological developments you have observed and relevant to the subject area of training (focus on digital technologies relevant to your job role)

In recent years, several technological developments have significantly impacted the field of software automation testing. Here are some key advancements relevant to this area:

Advanced Automation tools:- tools like Testim and Applitools leverage AI and machine learning to enhance test automation by automatically identifying and adapting to changes in the user interface and improving test script reliability.

Low-code / No-code platform:- platform such as Katalon Studio and uSetrace allow users to create automation tests with minimal coding, making it easier for non-developers to participate in test automation.

Integration with CI/CD pipelines:-

Continuous integration/continuous development (CI/CD):- Tools like Jenkins, GitLab CI, and CircleCI have become integral to the testing process, enabling automated tests to be triggered automatically with every code change and integrated into the deployment pipeline.

Cloud-Based Testing:-

Test environments: Services like Browserstack and Sauce Labs offer cloud-based testing environments, allowing testers to run tests across various browsers.

and devices without needing to maintain extensive in-house infrastructure.

Enhanced Test Management:-

- **Unified Test Management tools:-** Solutions such as Test Rail & Zephyr provide comprehensive test management capabilities, integrating test case management, execution

Performance Testing Innovations:-

- **Real-time Performance Monitoring:** Tools like Grafana and New Relic provide real-time monitoring and analytics, allowing testers to assess performance and detect issues during testing & production.

API Testing Improvements:-

- **Enhanced API Testing tools:-** Tools such as Postman and SoapUI have evolved to support comprehensive API testing, including automated tests, performance benchmarks, and detailed reporting.

Test Automation Frameworks:-

- **New frameworks:-** Emerging frameworks like Cypress for end-to-end testing and Playwright for cross-browser testing offer modern approaches to writing and executing automated tests with improved speed and reliability.

Shift-Left testing:-

- **Early Testing:** The shift-left approach emphasizes incorporating testing earlier in the development lifecycle. This practice encourages writing tests alongside code and performing automated tests as part of the development process.

Student Self Evaluation of the Short-Term Internship

Student Name:	Registration No:	
Term of Internship:	From:	To :
Date of Evaluation:		
Organization Name & Address:		

Please rate your performance in the following areas:

Rating Scale: Letter grade of CGPA calculation to be provided

1	Oral communication	1	2	3	4	5
2	Written communication	1	2	3	4	5
3	Proactiveness	1	2	3	4	5
4	Interaction ability with community	1	2	3	4	5
5	Positive Attitude	1	2	3	4	5
6	Self-confidence	1	2	3	4	5
7	Ability to learn	1	2	3	4	5
8	Work Plan and organization	1	2	3	4	5
9	Professionalism	1	2	3	4	5
10	Creativity	1	2	3	4	5
11	Quality of work done	1	2	3	4	5
12	Time Management	1	2	3	4	5
13	Understanding the Community	1	2	3	4	5
14	Achievement of Desired Outcomes	1	2	3	4	5
15	OVERALL PERFORMANCE	1	2	3	4	5

Date:

Signature of the Student