Dissertation / Project / Project Work Title:

FRAMEWORK FOR API AUTOMATION

**Course No. : SSZG628T**

**Course Title: Framework for API automation**

**Dissertation / Project /Project Work Done by:**

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**Degree Program: Software System**

**Research Area: Software Engineering**

**Dissertation / Project Work carried out at:**

**Cognizant Technology Solution Pvt Ltd, Pune**



**BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI**

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# Broad Area of Work

The API development is one of the highly used technology in current era. This project focus of decreasing time of testers and improve efficiency of testing process. Currently in the market there are some frameworks are available which are used for API testing. But out of those all the framework has some issue like, some has very low performance or some frameworks are no compatible to every environment. This project focus on build API automation framework based on tabular format data files such as excel or google sheets.

# Background

API development is evolving day by day. There are certain tools are in the market which helps to speed up API development process. But still in the industry automation testers are dependent on script automation. Every time they need to build script for certain scenario. This process is time consuming also repetitive actions are there. To solve this issue, we are going to develop one testing automation framework based on input file such as excel. Excel files are widely used tool in IT industry. We are going to use this excel file to build automation framework. Testers can use same excel file build expected test scenarios as well as their final testing sheet. This decrease time of testing and improves productivity. This has high response time and platform independent. This framework can be integrated with deployment pipeline such as Kubernetes.

# Objectives

The objectives of my project are as follows:

* + - Understand the current scenario with respect to the API development process.
    - Designing an Framework which helps testers to test their API service which minimal effort and efficient.
    - Building a excel compatible testing framework which helps in API testing process.
    - Framework should execute all the response validations steps.

# Scope of Work

Scope of this dissertation is to design a conversational search agent (dialogue based) which searches the searcher queries on web search engine and provide the desired information to the user.

# Plan of Work

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| --- | --- | --- |
| **Phases** | **Start Date-End Date** | **Work to be done** |
| Dissertation Outline | 03 Aug 2022 – 10 Aug 2022 | Literature Review and prepare Dissertation Outline |
| Design & Development | 12 Aug 2022 – 20 Sept 2022 | Design & Development Activity |
| Testing | 22 Sept 2022 – 18 Oct 2022 | Software Testing, User Evaluation & Conclusion |
| Dissertation Review | 18 Oct 2022 – 15 Nov 2022 | Submit Dissertation to Supervisor & Additional Examiner for review and feedback |
| Submission | 20 Nov 2022-25 Nov 2022 | Final Review and submission of Dissertation |

# Literature References

The state art is the base for any successful research project. In current project, the literature inclined towards the new domain of conversational information retrieval is considered. The following are referred journals from the preliminary literature review.

1. *Sunil L. Bangare, Seema Borse, Pallavi S. Bangare and Shital Nandedkar, 2012. Automated API testing approach. International Journal of Engineering Science and Technology (IJEST), 4, pp.673–676.*
2. *https://www.tutorialspoint.com/java/index.htm.*
3. [*https://www.guru99.com/api-testing.html*](https://www.guru99.com/api-testing.html)*.*

# Particulars of the Supervisor and Examiner

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| --- | --- | --- |
|  | **Supervisor** | **Additional Examiner** |
| Name | Vinod Mogarkar | Vinod Mogarkar |
| Qualification | M.E | M.E |
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# Remarks of the Supervisor

The study and project seem to be challenging as per current IT industry requirements. This help testers in so many ways to speed up their testing process and benefits in improving production. The student has covered all the required information about this project in his literature review. I have known the student from couple of years as we are working in same project in our organization. He is hard working student and have the skills to implement the experiment in standard research paradigm. I approved the following project as the supervisor

**Information about the Supervisor:**

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**BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI**

**WORK INTEGRATED LEARNING PROGRAMMES (WILP) DIVISION**

**SECOND SEMESTER OF ACADEMIC YEAR 2021-2022**

**SSZG628T: FRAMEWORK FOR API AUTOMATION OUTLINE**

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