ActiTime Automation

➢ INTRODUCTION:

- ### Description Of ActiTime:

  ACTITIME is an innovative and user-friendly web-based software application that provides businesses with time-tracking and management solutions. The ACTITIME internship program offers students the opportunity to gain practical experience in a dynamic work environment and learn industry-relevant skills. Note that we are going to implement this project using the python, selenium language.

- ### Project Overview

  In this project, we will build an website that deals with products for Time Tracking Software for cost-effective projects. actiTIME boosts performance, tracks work progress and doesn't leave any billable second untracked and records billable hours for a project resource for easy monitoring of the work hours.
  We can generate reports based on hours logged and also, we can integrate with other platforms like google calendar , Zapier etc.

  The ActiTime website is a simple project developed using python, pytest, selenium. This project is an interesting project for simply provides businesses with time-tracking management solutions. The user can tracks work progress and doesn't leave any billable second untracked and records billable hours for a project resource for easy monitoring of the work hours.

➢ Making Of The Project

The ActiTime Project is a software application that helps manage time and tasks for companies. In this document, we explore the process of creating the ActiTime Project from start to end. We discuss the project's overview, planning, design, development, testing, deployment, results and evaluation, and the lessons learned.

- ### Design and Development

  Web Architecture Design: In this stage, we created a detailed design for the web architecture of the project. The main objective of this was to provide a robust, secure, and scalable framework for the project. A multi-layered architecture with a Presentation layer, Service layer, and Data Access layer was developed, which provided separation of concern and modularity of the project.

  Development and implementation: With the design phase completed, we progressed to the development and implementation stage of the project. The development process followed an Agile-based methodology-focused on iterative, incremental development using Scrum and Kanban. The team consisted of developers, Quality Assurance testers, database administrators, and managers, with regular meetings and sprints encouraging better communication and collaboration.

- ### Testing and Quality Assurance

  Automated Testing: Unit testing was performed on each module, along with integration testing to test the functionality and integration of different modules of the project. Automated testing was also performed using tools such as Selenium and JUnit.

  Manual Testing: Manual testing was also performed to test the system under different use cases and scenarios. Quality Assurance testing involved identifying and reporting the bugs and defects in the system. Ensuring that the software was free from defects was an essential aspect of the project.

- Deployment and Implementation

  To deploy the ActiTime Project, we used an automated deployment tool called Jenkins, making deployment and maintenance of the project quicker and less error-prone. Jenkins made deployment to testing, staging, and production environments an agile process.

  For the implementation of the project, we used Amazon Web Services (AWS), which provided a reliable, scalable, and cost-effective infrastructure to host the ActiTime Project. AWS's autoscaling feature was used to accommodate a sudden increase in web traffic.

- Project Result and Evaluation

  Since its launch, the ActiTime Project has been widely recognized as a leading web-based time tracking and management software solution. Its users have given positive feedback and appreciation for the software's features, functionality, and ease of use.

  Several metrics are used to track the success of the ActiTime Project. The key performance indicators include user feedback, the number of registered users, session duration, and a reduction of errors.

- Theoretical Analysis:

  Example:

  Employee Name: john

Date	Day	Time In	Time Out	Total hours
O1/5/2023	Monday	9:00 AM	5:00 PM	8 HOURS
02/05/2023	Tuesday	9:00 AM	5:00 PM	8 HOURS
03/05/2023	Wednesday	9:00 AM	5:00 PM	8 HOURS
O4/05/2023	Thursday	9:00 AM	5:00 PM	8 HOURS
05/05/2023	Friday	9:00 AM	5:00 PM	8 HOURS

- Pre-Requirements:

  Before getting started with the actiTIME project, ensure you have the following prerequisites:

  List the software and tools that need to be installed before running the project, such as:

- Python (3.x)
- Selenium (3.x)
- Pytest (Latest Version)
- Pycharm

- Advantages

- Easy and fast data collection
- Higher time tracking accuracy
- Zero risk of micromanagement
- Handy integration for a streamlined workflow
- Affordable price

- Disadvantages

- False reassurance
- Cause anxiety
- False positives/negatives
- Over examination

➢ Conclusion

The ActiTime project was a success. The new employee management system is now in use and has helped to improve productivity, efficiency, and collaboration within the company. The next steps include regular maintenance, updates, and improvements based on user feedback.