

Literature Survey:

Introduction:

The literature survey/ review explores key aspects of software testing and automation in the context of healthcare services, focusing on the functionalities integral to the CURA Healthcare Service platform. The objective is to draw insights from existing studies and practices, providing a foundation for optimizing software testing strategies tailored to the specific requirements of healthcare service delivery.

- 1) The need for producing a quality software at a high speed makes it necessary for faster execution of software testing for ensuring high quality. The article presents a study about important automation testing tools and frameworks. The study identifies Katalon Studio, Selenium, UFT and TestComplete as some of the best automation tools and is able to prove why automation testing is better as it saves time and is more accurate than other forms of testing. – **A Study of Automated Software Testing: Automation Tools and Frameworks, Mubarak Albarka Umar, Chen Zhanfang, 2019**
- 2) This paper explores the Return of Investment (ROI) obtained by test automation in the industry from product and service organizations. It is understood that the right choice of automation technique would help in attaining faster, cleaner and high-quality results with low maintenance costs. – **A survey on software test automation return on investment, in organizations predominantly from Bengaluru, India, S.Reine De Reanzi, P.Ranjit Jeba Thengaiah, 2021**
- 3) If it is possible to achieve software testing at high speed, it gives the employees more time to focus on customer service which helps in uplifting customer satisfaction. This paper uses Selenium as an Automation tool to test the effectiveness of Software Automated Testing. Even if the cost might be higher, automated testing provides best results in security and efficiency in the long run. – **International Research**

**Journal of Modernization in Engineering Technology and Science
(Automation Testing), Adarsh Malik, Ashima Mehta, 2022**

- 4) This study aims at studying the pattern of use of appointment systems by patients and to measure their level of satisfaction by the results. The studies showed that Web-based application systems and Interactive Voice Response (IVR) were the highest used appointment booking systems with 61% and 48 % respectively. The people who had easiest access to Internet which accounted to about 71% preferred the web-based applications. The customer satisfaction was measured to be about 49.12+-16.04 out of 100 regardless of the type of system used. – **The use of various appointment systems among patients visiting academic outpatient centers in Kerman and the evaluation of patients' perspective and satisfaction, Fatemeh Bagheri, Farzaneh Behnam, Zahra Galavi, Leila Ahmadian, 2022**
- 5) This particular study dwelves into the practice of online doctor appointment booking via a website which is expected to make it easier and less time consuming for the patients. Such websites are able to provide a choice to the patients to view details and ratings of the available doctors and health centres. They can also get to know the available booking slots and choose a preferred date and time. This practice considerably reduces the waiting times. It is also convenient for the health centres to record such appointments. – **Online Doctor Appointment System, Venkatesh Rallapalli, Dipti Menghani, Hema Gallani, Gaytri Aasija, Dr Dashrath Mane, 2022**

Software Testing in Healthcare Environments:

1.1 Context:

Healthcare platforms, exemplified by CURA Healthcare Service, play a pivotal role in the digital healthcare system. The intensification of patient interactions and data management underscores the critical need for reliable, secure, and high-performance software systems.

1.2 Impactful Practices:

Existing literature emphasizes the significant impact of robust testing processes in healthcare environments. Best practices advocate for a harmonious blend of manual and automated testing, focusing on meticulous test case preparation and continuous testing throughout the software development life cycle (SDLC).

Automation Testing and Tools in Healthcare:

2.1 Impact on Healthcare:

Studies highlight the substantial impact of automation testing in healthcare settings, enabling swift and repetitive testing processes. This impact is especially crucial for accelerating releases and ensuring proficient regression testing. Understanding the nuances of implementing automation in healthcare is pivotal for optimizing the CURA project's impact.

2.2 Katalon Studio in Healthcare:

Exploration of automation tools reveals Katalon Studio as a preferred choice, showcasing a profound impact on testing efficiency and time-to-market reduction in healthcare service platforms. Its user-friendly interface and versatile scripting capabilities contribute significantly to the overall impact on healthcare software testing.

Continuous Integration in Healthcare Software Testing:

3.1 Jenkins' Impact on Healthcare:

Continuous integration (CI) emerges as a key component with a substantial impact on modern software development and testing in healthcare. Literature underscores Jenkins' impact in coordinating automated builds, integrating with version control (Git), and streamlining continuous testing. This impact ensures early defect detection and optimizes the delivery pipeline in healthcare environments.

Cross-Browser Testing Best Practices in Healthcare:

4.1 Ensuring Compatibility Impact:

Ensuring compatibility through cross-browser testing has a profound impact on healthcare platforms like CURA. Literature outlines impactful best practices utilizing tools like TestCloud, addressing challenges associated with diverse browser environments, and enhancing the overall impact on healthcare service delivery.

User Authentication and Security Testing in Healthcare:

5.1 Enhancing User Authentication Security Impact:

The impact of robust user authentication and security testing is pivotal in healthcare platforms. Literature underscores the necessity for impactful authentication mechanisms to safeguard user accounts and sensitive data, ultimately enhancing the overall impact on the security of healthcare information.

Reporting and Analysis in Healthcare Software Testing:

6.1 Impactful Reporting Mechanisms:

Literature on reporting and analysis in software testing emphasizes the impactful nature of clear, actionable reports. Implementing comprehensive reporting mechanisms and automated email notifications through tools like Katalon ensures prompt communication of impactful test execution results, facilitating informed decision-making with a substantial impact.

Conclusion:

In conclusion, the literature review provides insights into the impactful nature of software testing components in healthcare, specifically tailored to optimize the CURA project. By leveraging impactful practices in healthcare testing, utilizing automation tools like Katalon Studio, embedding continuous integration with Jenkins, and addressing critical aspects such as cross-browser compatibility and user authentication security, the testing strategy for the CURA project can be refined to make a substantial impact on the quality and reliability of healthcare service delivery.