Problem Definition/ Problem Understanding:

CURA Healthcare Services

Business Problem:

Healthcare is a primary requirement for all individuals. The growing demand for best healthcare services makes it necessary for getting quick appointments for obtaining these services as soon as possible. The CURA Healthcare Service website makes this possible. Currently manual and less efficient testing makes the website prone to bugs, system malfunctions and security issues which could question the reliability of the website and lead to less customer satisfaction. Thus, the goal of our project is to ensure less customer waiting time and to provide more information to the customers regarding doctor availability and healthcare centre schedules.

Business Requirements:

1. This project aims at establishing a reliable automated testing environment for the website to ensure its full functionality in all domains and to ensure efficient execution of repetitive tasks.
2. It aims at broadening its test cases to be able to cover all possible functionalities of the website and test their efficiency.
3. Run a group of test cases as one test suite for saving time. This could help in faster release cycles.
4. Generate regular reports to track the website's performance and identify areas of improvement.
5. All information regarding doctor availability and drugs should be up to date. The method of classification of the drugs should also be updated but at the same time flexible to incorporate changes to it according to changing times.
6. The project should follow all relevant laws and guidelines like FDA regulations for classifying drugs.
7. Ensure a user friendly interface with easy navigation and working buttons.

Literature Survey:

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

Social or Business Impact:

With automated testing of the website in action, we are able to achieve a fully functional website with a user-friendly interface. It provides good security and is able to avoid any bugs. All this allows timely execution of the operations in the website and hence makes the process of booking medical appointments easier and more efficient thus leaving each patient happy.

Social Impact: A properly working website for online appointment booking ensures good patient health care. It also helps health centres to treat patients at the right time without any delay. Such an early intervention could be crucial for many patients to avoid further complications. A user friendly interface also helps patients who are not that experienced with technology to access and navigate through the website easily.

Business Impact: New features like an email or sms notification system to inform patients of the availability or absence of certain doctors could be developed. The website could also develop a form of recommendation engine

to recommend certain doctors or healthcare centres to the patient on the basis of the patient's needs and available ratings and reviews.