

## **Abstract**

**In software development testing is an activity to find defect in the software. There is a lot of way to find the bugs and error through testing. One of them is GUI testing. Generally, it checks the screens along controls such as menus, buttons, icons, etc. It is very crucial to ensure an application's GUI to make sure the application is convenient and intuitive, but the most important things are the correctness and accuracy of its interactions with graphical user interface. There are several ways to do GUI testing, this means it is very important to know the best approach for GUI testing. This paper discusses about comparative analysis between two approach of GUI Testing, Automated Testing and Manual Exploratory Testing, the approach is selected as both are fully compliant. The analysis is done by computing the average execution time and defect density from the two approaches. The results showed that automated testing is a quicker and prevalent approach, both in terms of testing time and detected defect density.**

**Keywords: Testing, GUI Testing, Automated Testing, Exploratory Manual Testing, Average Testing Time, Defect Density**