INTRODUCTION

**Scope:**

Provides end to end continuous Integration and continuous deployment by using DevOps Tools.

Application defines student to provide entire information and which stores in DB for better analysis of data.

Provides security using 3-tier architecture by queueing the load in the web server queue when the server is bombarded with load.

**Objective:**

Deploying application with 3-tier and bring the application to live using cloud infrastructure

Jenkins CI CD tool for end-to-end automation and any build failures will be detect at the starting stages

Assigning the DNS to the Load Balancer IP with the Freenom subscription.

For https security to the domain created open ssl certificates to make the domain https.

Analysing the logs at the Load balancer level, web server level and app server level for better understanding the application flow.

Abstract

The main aim of our project is to build and deploy application in 3-tier architecture. Our main mottto of this project is to develop an application with full end-to-end automation using ci/cd build process and deploying war file into tomcat servers using DevOps tools.

DevOps is a conceptual framework for reintegrating and development and operations of informations systems. This allows a single team to handle the entire application lifecycle, from development to **testing, deployment**, and **operations**. DevOps helps you to reduce the disconnection between software developers, quality assurance (QA) engineers, and system administrators.

As the project based on automation, it shows less errors and reduces time compared to manual process.