**VIT**

**SCHOOL OF INFORMATION TECHNOLOGY AND ENGINEERING**

**M. Tech – INFORMATION TECHNOLOGY**

**FINAL YEAR PROJECT: SYNOPSIS SUBMISSION SHEET**

|  |
| --- |
| **PERSONAL DETAILS**  **STUDENT NAME:** SANKET SURESH PETHKAR  **REGISTRATION NUMBER (VIT):** 14MIN2879  **CONTACT NUMBER:** +91 - 9923545186  **EMAIL ADDRESS:** sanket.pethkar@wipro.com |
| **PROJECT DETAILS**  **GUIDE NAME:** Prof. Sandeep Patil  **PROJECT DOMAIN:** Application Delivery. |

|  |
| --- |
| **DevOps - Automation**  **Continuous Integration and Continuous Delivery (CI/CD)**  **CONTEXT:**  **Continuous Delivery**(CD) is about automating Software Release Management (automated infrastructure provisioning, automated build, automated deploy and automated testing)  **Continuous integration (CI)** systems provide automation of the software build and validation process driven in a continuous way by running a configured sequence of operations every time a software change is checked into the source code management repository.  **PROBLEM:**  In the current fast moving IT world where everyone is moving to Agile, the number of deployments per unit time is increased so much that it is difficult to manage the infrastructure provisioning, build, deploy and testing manually. Manual work will need large number of resources, more time and there will be chance of errors and issues due to bulk work. To overcome all these challenges automation is required.  **SOLUTION: Implementing a CI/CD Pipeline for SDLC**  DevOps is the combination of cultural philosophies, practices, and tools that increases an organization’s ability to deliver applications and services at high velocity: evolving and improving products at a faster pace than organizations using traditional software development and infrastructure management processes. This speed enables organizations to better serve their customers and compete more effectively in the market.  **DevOps Practices**  The following are DevOps best practices:   * Continuous Integration * Continuous Delivery * Micro services * Infrastructure as Code * Monitoring and Logging * Communication and Collaboration   CI/CD Pipeline Workflow:    **HARDWARE AND SOFTWARE REQUIREMENTS:**   1. Base Machine 🡪 1 TB ROM, 8GB RAM, Windows 7/10 OS 2. Virtual Machine 🡪 500 GB ROM, 8GB RAM, RHEL/UBUNTO/CENTOS OS (Cloud/On Premises) 3. High Speed Internet with unlimited data. |



STUDENT SIGNATURE GUIDE SIGNATURE