**VIT**

**SCHOOL OF INFORMATION TECHNOLOGY AND ENGINEERING**

**M. Tech – INFORMATION TECHNOLOGY**

**FINAL YEAR PROJECT: SYNOPSIS SUBMISSION SHEET**

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| **PROJECT DETAILS**  **GUIDE NAME:** Prof. Sandeep Patil  **PROJECT DOMAIN:** Application Delivery. |

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| **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:**  Software and the Internet have transformed the world and its industries, from shopping to entertainment to banking. Software no longer merely supports a business; rather it becomes an integral component of every part of a business. Companies interact with their customers through software delivered as online services or applications and on all sorts of devices. They also use software to increase operational efficiencies by transforming every part of the value chain, such as logistics, communications, and operations. In a similar way that physical goods companies transformed how they design, build, and deliver products using industrial automation throughout the 20th century, companies in today’s world must transform how they build and deliver software.  **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