# Experiment 05 - Jenkins Setup

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| Subject | DevOps Lab |
| LO Mapped | LO1: To understand the fundamentals of DevOps engineering and be fully proficient with DevOps terminologies, concepts, benefits, and deployment options to meet your business requirements  LO3: To understand the importance of Jenkins to Build and deploy Software Applications on server environment |
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**Aim**: To understand Continuous Integration, install and configure Jenkins with Maven/Ant/Gradle to set up a build job.

**Introduction**:

**Continuous Integration**

**Importance of Continuous Integration Jenkins**:

**Installation**:

**Build Job**:

**Conclusion**

# Experiment 06 - Jenkins Pipeline

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| Subject | DevOps Lab |
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|  |  |

**Aim**:

To Build the pipeline of jobs using Maven / Gradle / Ant in Jenkins, create a pipeline script to build and deploy an application over the tomcat server.

**Introduction**:

Pipeline

Purpose of Pipelining Advantages Of Jenkins Pipeline **Build Tool**:

Core Concepts of Maven:

**Pipeline Jobs**:

Creating a Jenkins Pipeline using Maven:

**Conclusion**

# Experiment 07 - Jenkins Architecture

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| Subject | DevOps Lab |
| LO Mapped | LO1: To understand the fundamentals of DevOps engineering and be fully proficient with DevOps terminologies, concepts, benefits, and deployment options to meet your business requirements  LO3: To understand the importance of Jenkins to Build and deploy Software Applications on server environment |
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**Aim**:

To understand Jenkins Master-Slave Architecture and scale your Jenkins standaloneimplementation by implementing slave nodes.

**Architecture**:

Jenkins Architecture

**Scaling**:

**Conclusion**

Thus, we have understood what Jenkins Master and Slave Architecture is along with the importance of scalability while developing software. We also learnt the steps to show scalability in our Jenkins setup by creating new slave nodes.