#### **DEVOPS**

#### DAY 1- TASK

# **Software Development Life Cycle (SDLC):**

- Requirement Analysis: Gathering business needs.
- Planning: Defining project scope and resources.
- Design: Architectural and UI/UX planning.
- Implementation: Writing and integrating code.
- Testing: Identifying and fixing bugs.
- Deployment: Releasing software to production.
- Maintenance: Updating and fixing software post-deployment.

# **DevOps Basics:**

- Development & Version Control: Git, GitHub, GitLab
- Continuous Integration (CI): Jenkins, GitHub Actions
- Continuous Deployment (CD): Docker, Kubernetes
- Monitoring & Logging: Prometheus, Grafana, ELK Stack
- Configuration Management: Ansible, Terraform
- Collaboration & Communication: Slack, Jira

### **Pushing Images to Docker Hub:**

- Login to Docker Hub: docker login -u <your-username> -p <your-password>
- Build Docker Image: docker build -t <your-username>/<image-name>:latest .
- Tag the Image: docker tag <image-name>:latest <your-username>/<image-name>:latest
- Push the Image to Docker Hub: docker push <your-username>/<image-name>:latest
- Verify the Image on Docker Hub by logging in and checking the repository.

### **Deploy Nginx in Docker:**

- Pull the Nginx Image: docker pull nginx
- Run Nginx Container: docker run -d -p 8080:80 --name my-nginx nginx
- Verify Running Container: docker ps
- Access Nginx by opening a web browser and going to http://localhost:8080
- Stop and Remove the Container: docker stop my-nginx && docker rm my-nginx

