| Containerization Strategy |
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| **Project Title** | **TEAM # 1**  **Part # 4**  **Containerization Strategy** |
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| Objective The objective of this section is to demonstrate how Docker will be utilized to containerize the application components. By creating containers for all required services in the architecture design, we will ensure a consistent environment across different stages of development and deployment. This approach will streamline the development process, facilitate easier testing, and ensure that the application runs reliably when moved from one computing environment to another. Why Needed Containerization is essential for achieving consistent environments across different stages of the application lifecycle, from development to production. Docker, a leading platform for containerization, allows developers to package applications and their dependencies into lightweight, portable containers. These containers can run consistently on any environment that supports Docker, eliminating the "it works on my machine" problem. By applying containerization techniques, we will ensure that each service in our application architecture runs in its isolated environment, leading to better manageability, security, and scalability. Course RegistrationUI Component – Couse Registration and User Login Webapp.Dockerfile A screen shot of a computer program  Description automatically generated Backend MicroservicesSearch Courses And Registration Note  - We are storing username and passwords in docker-compose file however in production we will store it in Vault Server Docker Compose.yaml **A screenshot of a computer  Description automatically generated** Config.pyA screen shot of a computer program  Description automatically generatedDocker for Flask AppA screenshot of a computer program  Description automatically generated  Course UploadDocker Compose.yaml **A screenshot of a computer  Description automatically generated** Config.py A screen shot of a computer program  Description automatically generated Docker for Flask App A screenshot of a computer program  Description automatically generated   NotificationDocker Compose.yaml **A screenshot of a computer  Description automatically generated** Config.pyA screen shot of a computer program  Description automatically generatedDocker for Flask App A screenshot of a computer program  Description automatically generated  END |
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