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SIT725 - TASK 1.3P: DESIGN YOUR SERVICE

Student Vision: DevOps Excellence Platform

My Professional Identity

As an **Azure DevOps Engineer**, I specialize in transforming traditional development workflows into streamlined, automated pipelines that accelerate software delivery while maintaining enterprise-grade security and reliability.

Service Vision: "CloudOps Catalyst"

My comprehensive web platform will demonstrate cutting-edge DevOps practices through an interactive showcase featuring:

Core Features:

- **Live CI/CD Pipeline Visualizer**: Real-time demonstration of Jenkins-powered continuous integration workflows
- **Container Orchestration Lab**: Interactive Kubernetes cluster management with Docker containerization examples
- **Azure Infrastructure Gallery**: Showcase of scalable cloud architectures I've designed and implemented
- **Automated Deployment Simulator**: Visitors can trigger sample deployments to witness infrastructure-as-code in action

Technical Implementation: The platform itself will be built using modern DevOps principles deployed via Azure DevOps pipelines, containerized with Docker, orchestrated through Azure Kubernetes Service (AKS), and monitored with comprehensive observability tools.

Target Audience: Companies seeking DevOps transformation, developers wanting to learn modern practices, and organizations requiring scalable cloud infrastructure solutions.

This living portfolio will not only showcase my technical expertise but also serve as a practical demonstration of how proper DevOps implementation can revolutionize software development lifecycles.

Visual Architecture Overview

CloudOps Catalyst Platform Architecture

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|                    CLOUDOPS CATALYST PLATFORM                |
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    |   USER PORTAL    |  |   ADMIN PANEL    |  |   DEMO LAB       |
    |                  |  |                  |  |                  |
    | • Project View   |  | • Pipeline Mgmt  |  | • Live CI/CD     |
    | • Tech Stack     |  | • User Analytics.|  | • K8s Cluster    |
    | • Case Studies   |  | • System Health  |  | • Docker Demo    |
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    |                  AZURE CLOUD INFRASTRUCTURE                  |
    |                                                             |
    |   ┌──────────┐  ┌──────────┐  ┌──────────┐  ┌──────────┐    |
    |   | JENKINS  |  | AKS      |  | CONTAINER|  | AZURE    |    |
    |   | SERVER   |  | CLUSTER  |  | REGISTRY |  | DEVOPS   |    |
    |   |          |  |          |  |          |  |          |    |
    |   | • CI/CD  |  | • K8s Pods|  | • Docker |  | • Repos  |    |
    |   | • Automated| | • Load Bal|  | • Images |  | • Boards |    |
    |   | • Testing |  | • Scaling |  | • Versions|  | • Pipes  |    |
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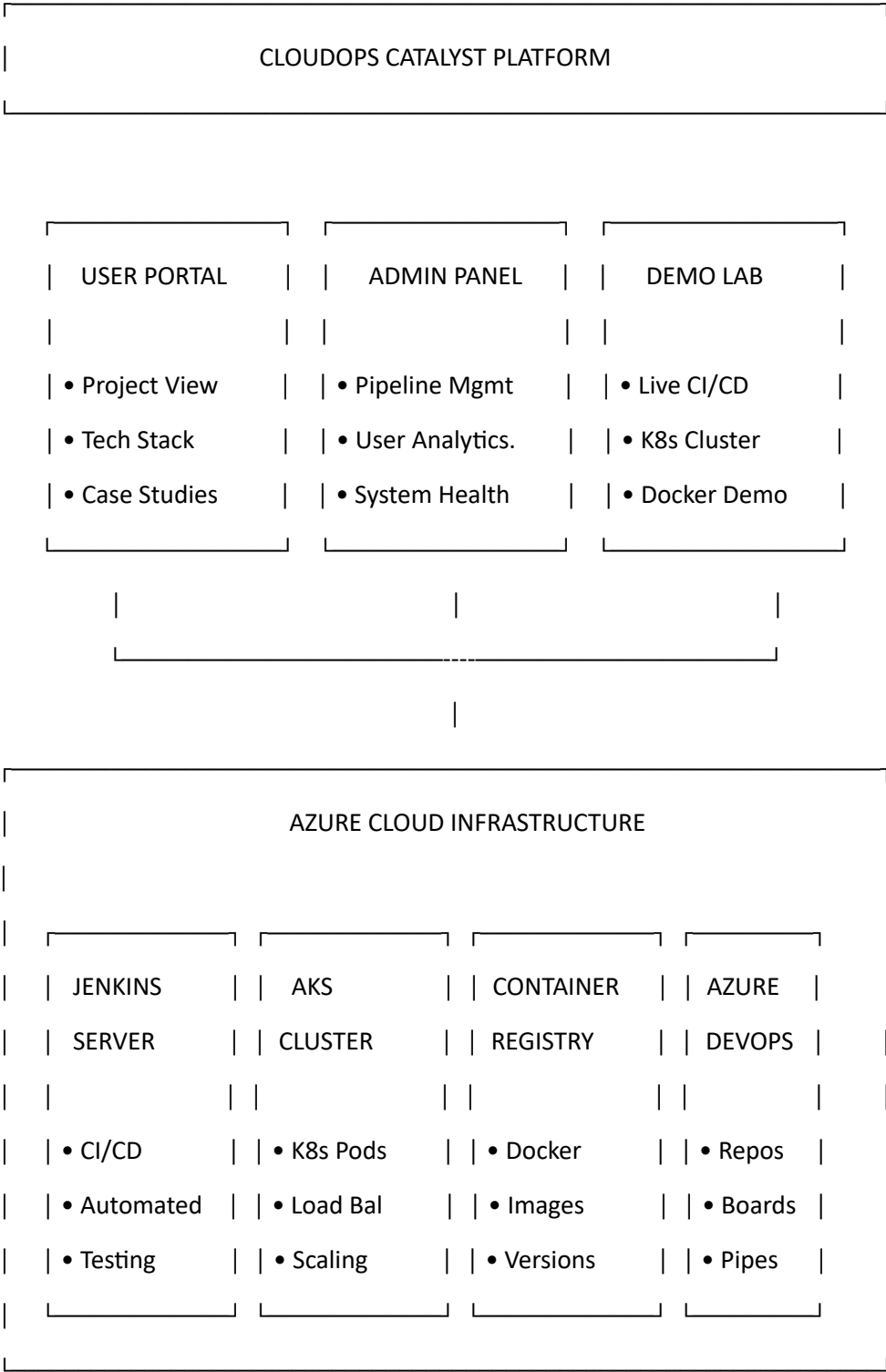
DevOps Pipeline Flow Visualization
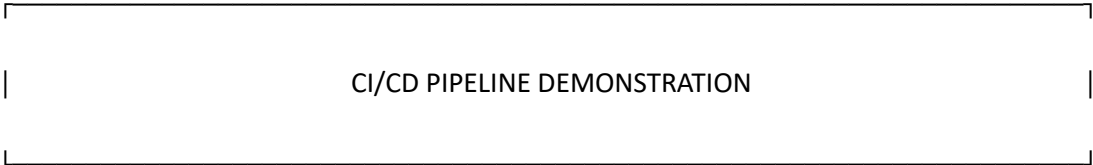
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│                    CI/CD PIPELINE DEMONSTRATION                 │
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DEVELOPER → CODE COMMIT → JENKINS BUILD → DOCKER IMAGE → KUBERNETES DEPLOY

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  │ Git   │    │ Azure │      │ Build &│      │Container│     │ AKS   │
  │ Repo  │    │ DevOps│      │ Test   │      │Registry │     │Cluster│
  │       │    │       │      │        │      │         │     │       │
  │ • Code│    │ • Trigger│   │ • Unit │      │ • Store │     │ • Deploy│
  │ • Branch│  │ • Webhook│   │ • Lint │      │ • Tag   │     │ • Scale │
  │ • PR  │    │ • Queue  │   │ • Sec  │      │ • Scan  │     │ • Monitor│
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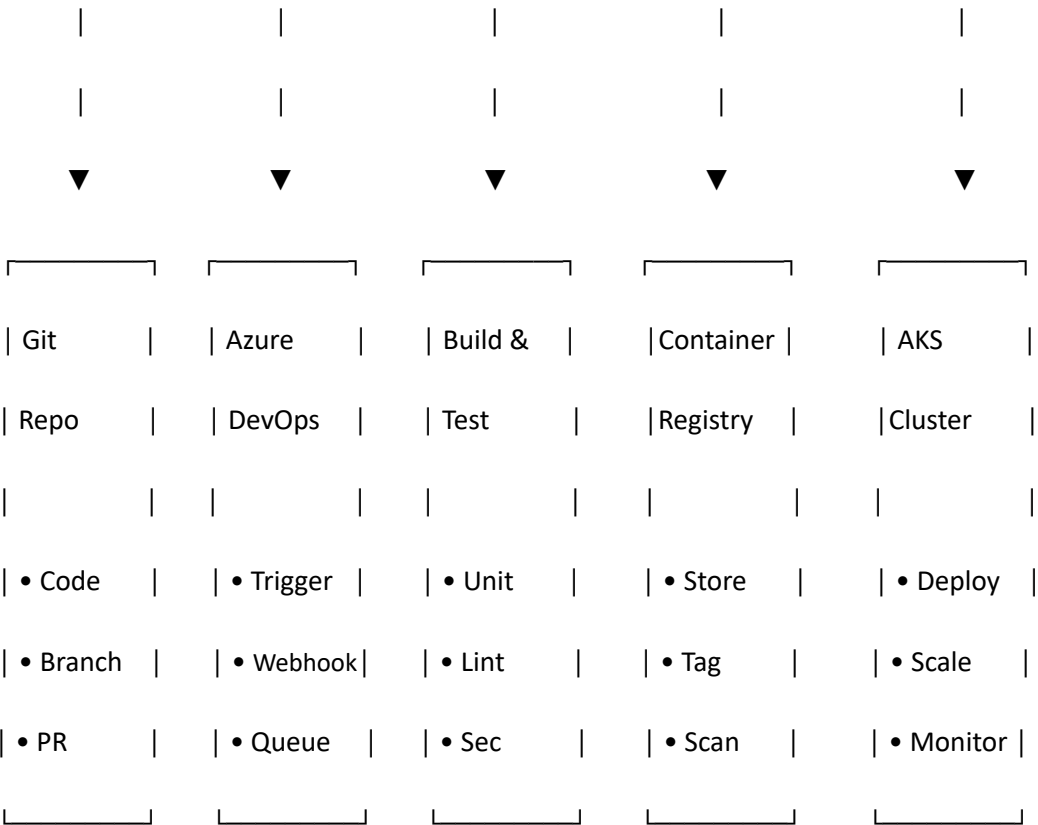
Technology Stack Showcase

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|                 EXPERTISE AREAS                  |
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      CLOUD PLATFORM      CONTAINERIZATION      AUTOMATION

      ┌────────────┐      ┌────────────┐      ┌────────────┐
      |  AZURE     |      |  DOCKER    |      |  JENKINS   |
      |            |      |            |      |            |
      | • AKS      | ←→   | • Images   | ←→   | • Pipelines|
      | • DevOps   |      | • Compose  |      | • Plugins  |
      | • Monitor  |      | • Registry |      | • Scripts  |
      └────────────┘      └────────────┘      └────────────┘
             |                  |                   |
             └──────────────────────────────────────┘
                               |
                        ┌────────────┐
                        | KUBERNETES |
                        |            |
                        | • Pods     |
                        | • Services |
                        | • Ingress  |
                        └────────────┘
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