

Project #1 – Multi-Container App

Assignment #4 – Kubernetes Deployment

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Advanced Infrastructures for Data Science

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Master in Data Science and Engineering (MDSE) Course

Project #1 – Multi-container App

Project Name: Tracking Goals Web Application

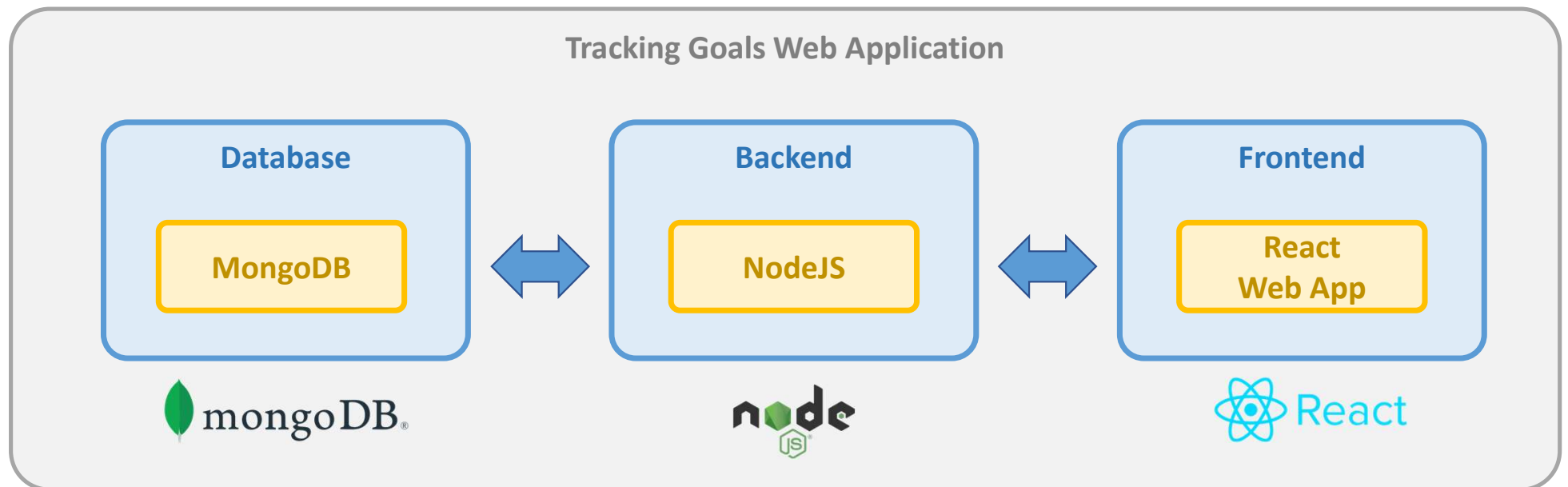
Project Objective: Deploy a multi-container app with Docker
and Kubernetes

Web Application Description

Tracking Goal Web Application

App Objective, Architecture & Technologies

App Objective: Allows users to manage (create, view and delete) their goals



Assignment #4

Project #1 Assignments

- Project #1
 - Assignment #1 (3rd October): Build images and launch containers
 - Assignment #2 (10th October): Configure containers connectivity and data persistence
 - Assignment #3 (17th October): Deploy the multi-container app through Docker Compose
 - Assignment #4 (19th October): Deploy the multi-container app in a Kubernetes Cluster

Assignment #4

Tasks

1. Install Kubernetes (minikube)
2. Deploy the multi-container application using Kubernetes Imperative Approach
 1. No data persistence
 2. Replicas (database – 1; backend – 2; frontend – 3)
3. Deploy the multi-container application using Kubernetes Declarative Approach
 1. No data persistence
 2. Replicas (database – 1; backend – 2; frontend – 3)



**Good
Work**