**Day 6**

### **Project 01**

### **Deploying a Node.js App Using Minikube Kubernetes**

#### **Overview**

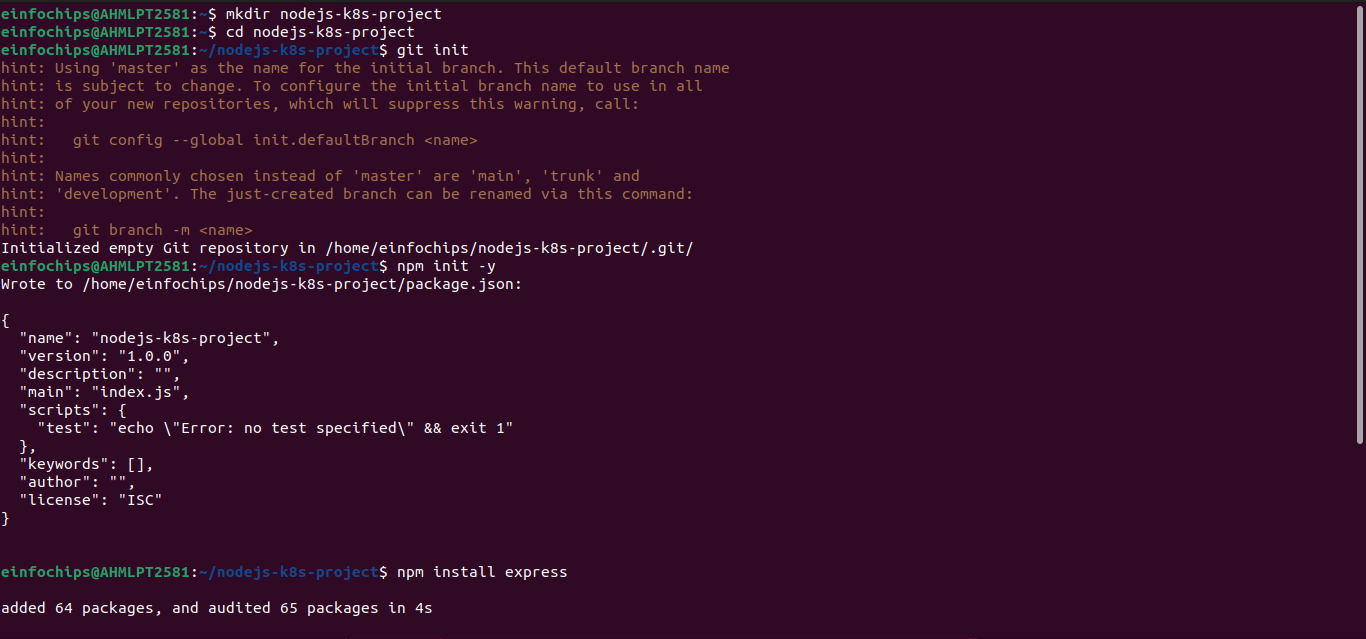
This project guides you through deploying a Node.js application using Minikube Kubernetes. You'll use Git for version control, explore branching and fast-forward merges, and set up Kubernetes services and deployment pods, including ClusterIP and NodePort service types.

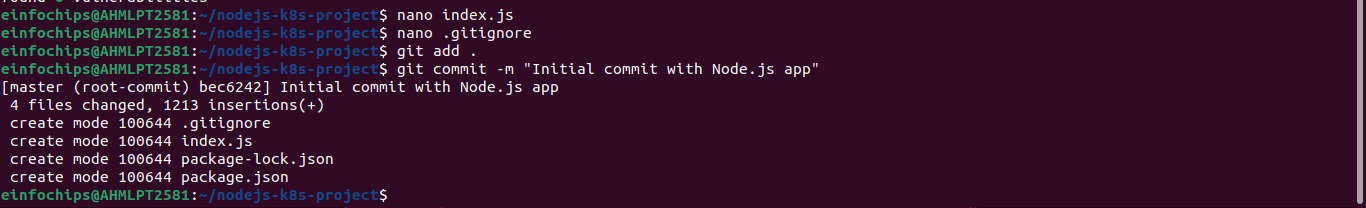
#### **Prerequisites**

* Minikube installed
* kubectl installed
* Git installed
* Node.js installed ([https://nodejs.org/en/download/package-manager/all#debian-and-ubuntu-based-linux-distributions](https://nodejs.org/en/download/package-manager/all" \l "debian-and-ubuntu-based-linux-distributions))

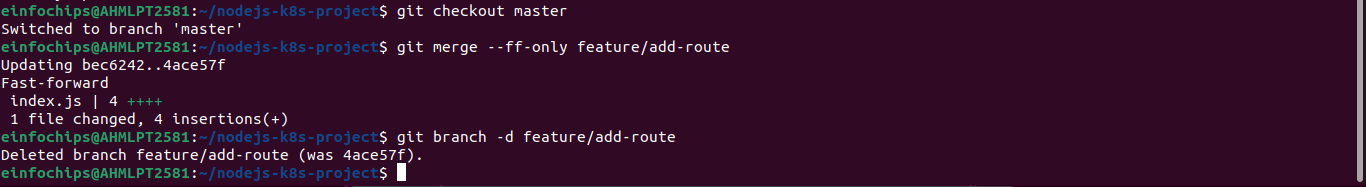
#### **Project Steps**

### **1. Set Up Git Version Control**

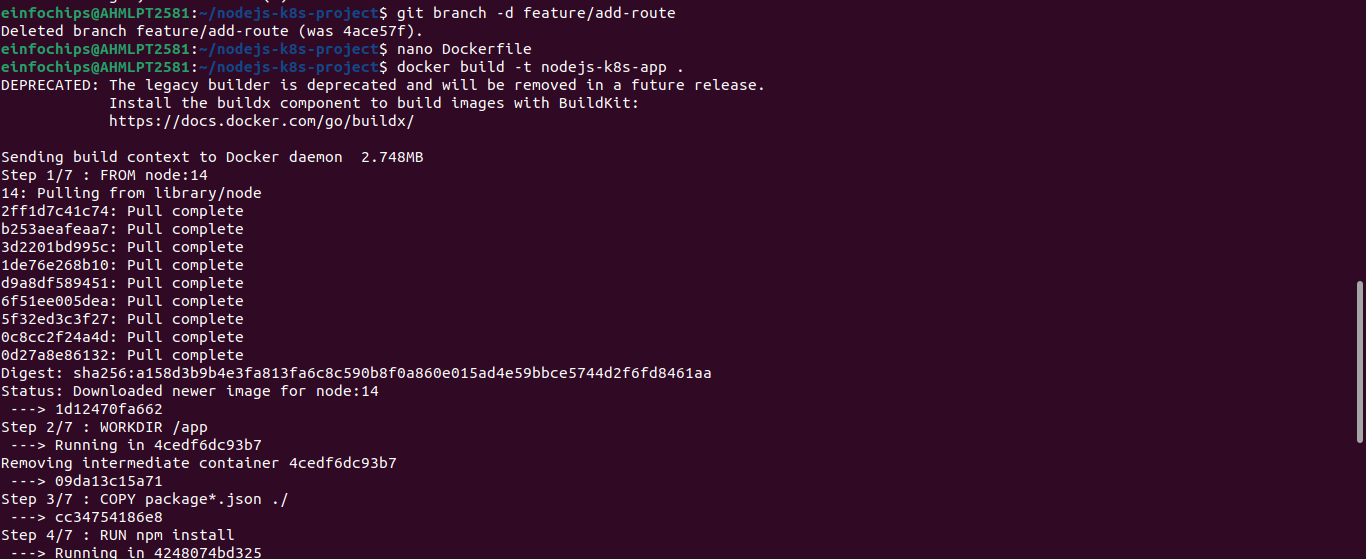
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### **2. Branching and Fast-Forward Merge**

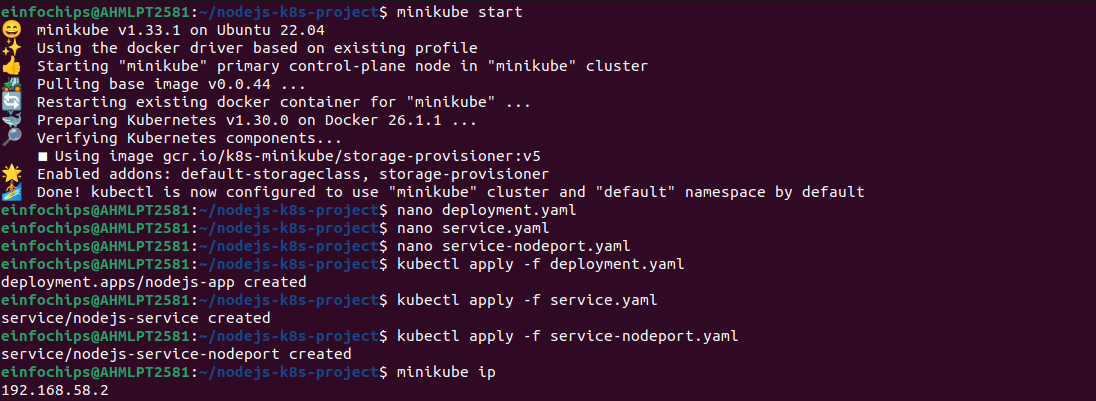


### **3. Containerize the Node.js Application**





### **4. Deploying to Minikube Kubernetes**



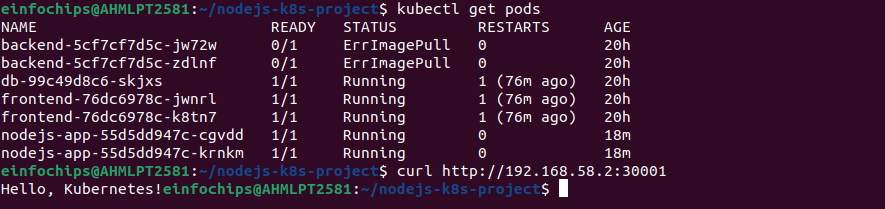
### **5. Services and Networking**

### **6. Making Changes to the Node.js Application**

**6.1. Create a New Branch for Changes**

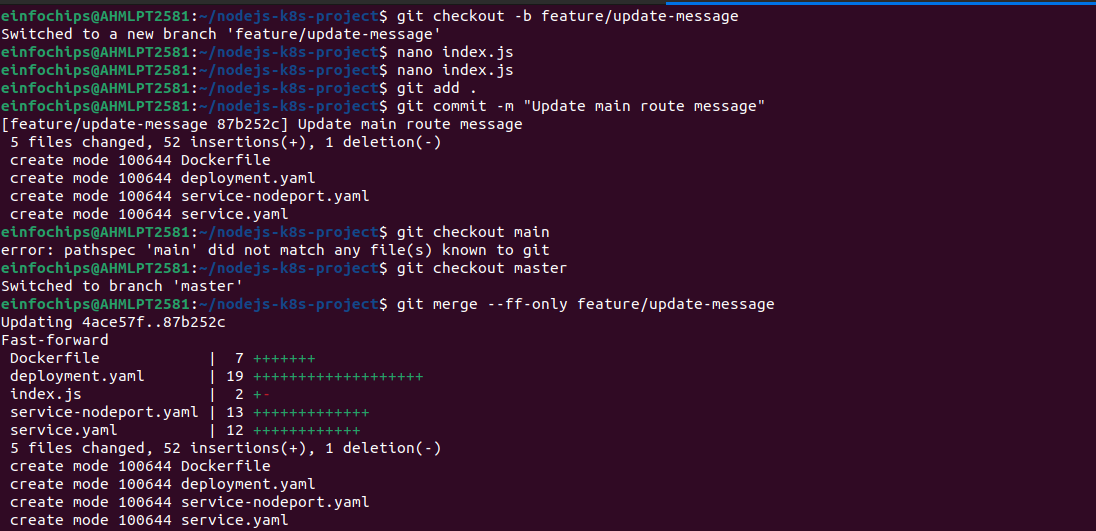
**6.2. Update the Application**

**6.3. Commit the Changes**

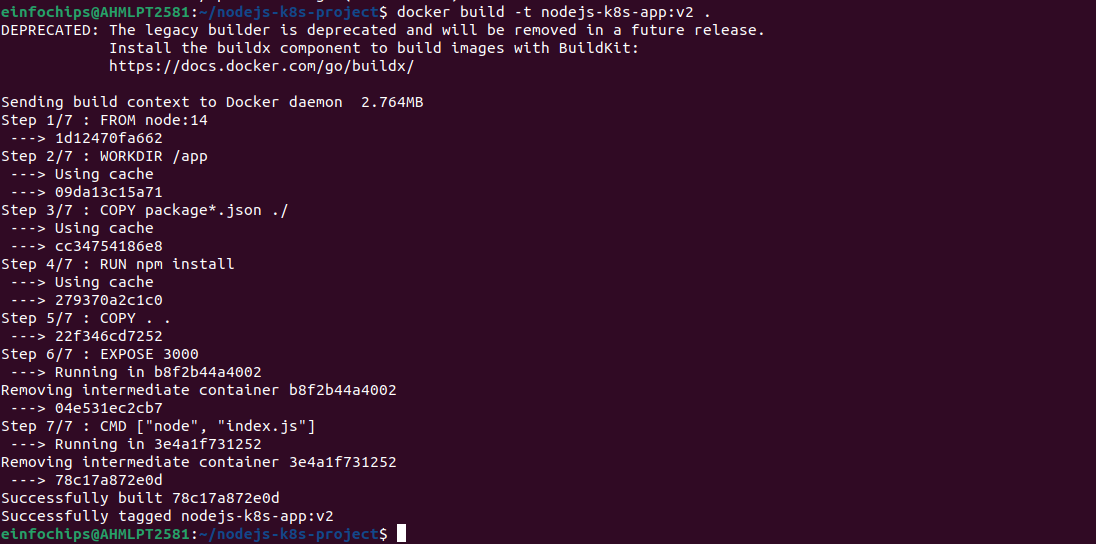


### **7. Merge the Changes and Rebuild the Docker Image**

**7.1. Merge the Feature Branch**



**7.2. Rebuild the Docker Image**

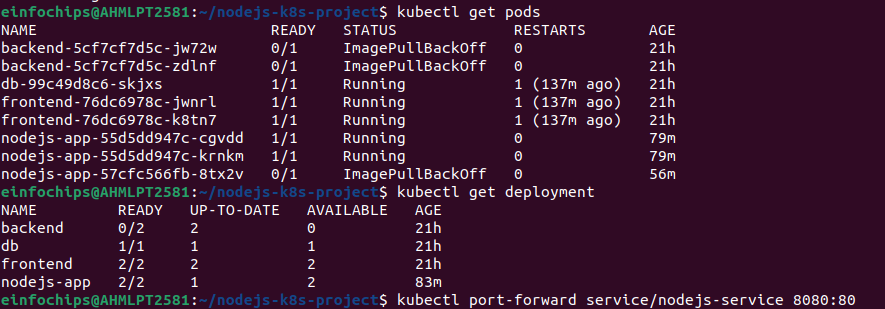


### **8. Update Kubernetes Deployment**

**8.1. Update the Deployment Manifest**

**8.2. Apply the Updated Manifest**

**8.3. Verify the Update**



### **9. Access the Updated Application**

**9.1. Access Through ClusterIP Service**

**9.2. Access Through NodePort Service**



**Project 02**

### **Deploying a Python Flask App Using Minikube Kubernetes**

#### **Overview**

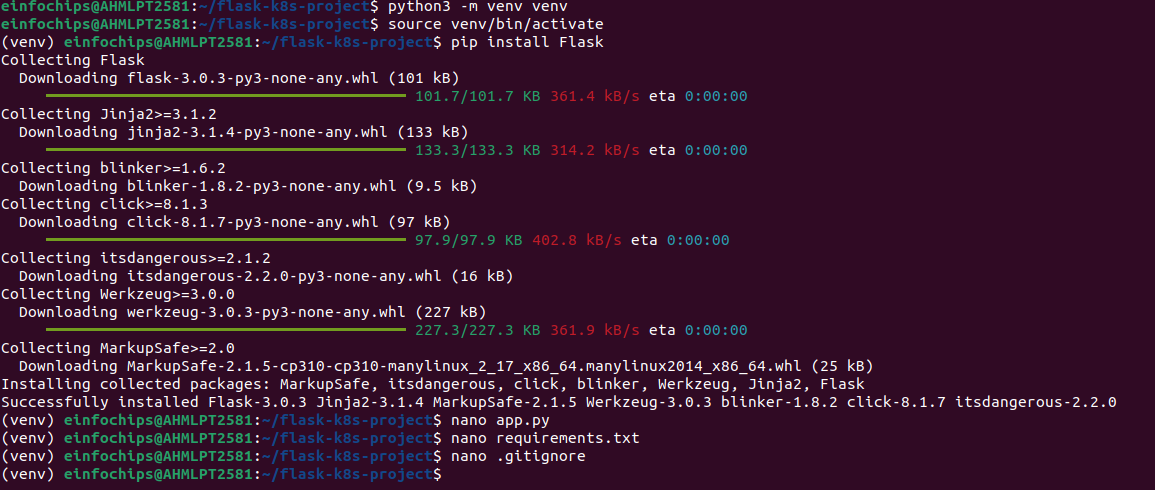
This project guides you through deploying a Python Flask application using Minikube Kubernetes. You'll use Git for version control, explore branching and fast-forward merges, and set up Kubernetes services and deployment pods, including ClusterIP and NodePort service types.

#### **Prerequisites**

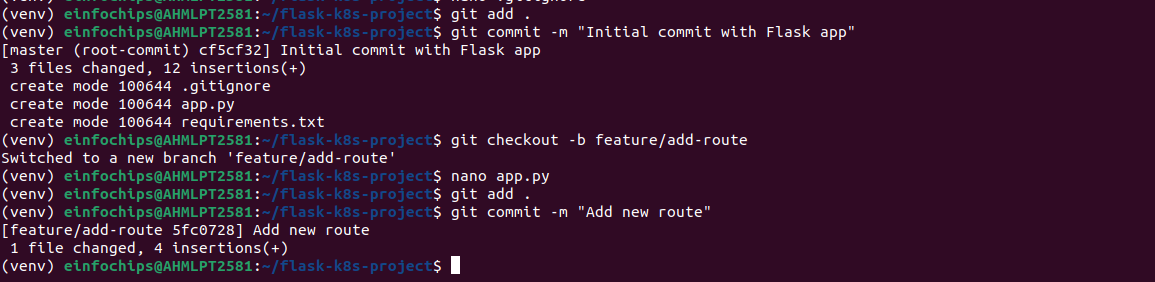
* Minikube installed
* kubectl installed
* Git installed
* Python installed

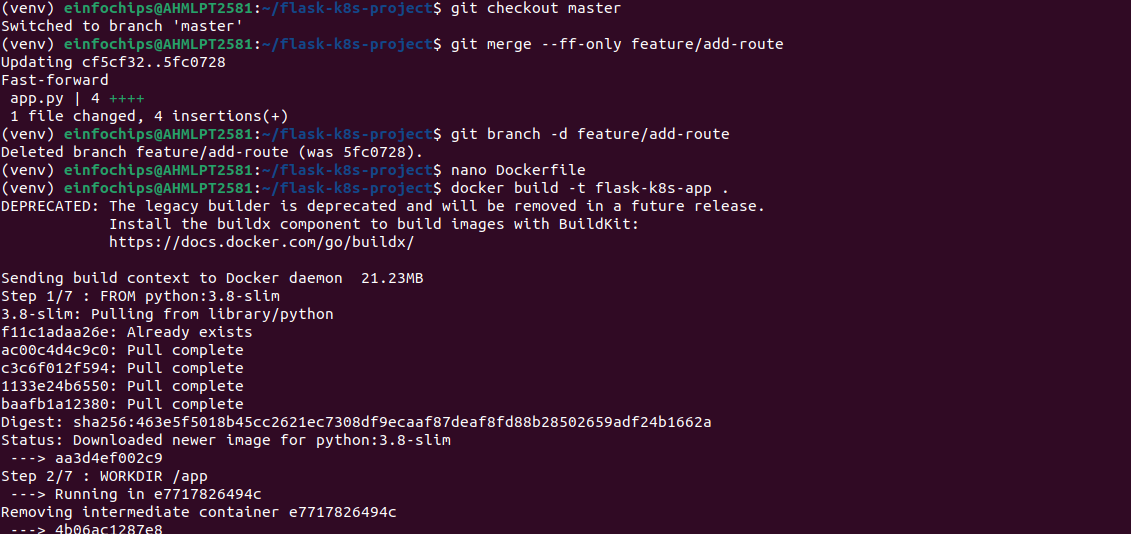
#### **Project Steps**

### **1. Set Up Git Version Control**

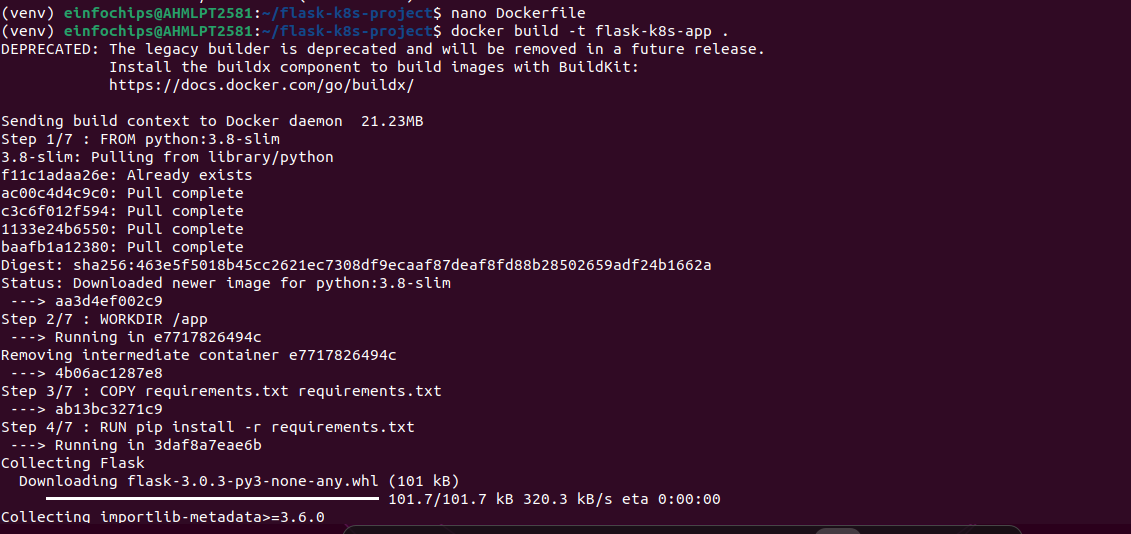


### **2. Branching and Fast-Forward Merge**





### **3. Containerize the Flask Application**



### **4. Deploying to Minikube Kubernetes**

