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#\*Start of AI Generated Content\*

# **Docker Deployment Steps for Profile Management API**

## **Step 1: Create a Dockerfile**

Create a new file named Dockerfile in the root directory of your project with the following contents:

# Use an official Python image as the base  
FROM python:3.9-slim  
  
# Set the working directory to /app  
WORKDIR /app  
  
# Copy the requirements file  
COPY requirements.txt .  
  
# Install the dependencies  
RUN pip install -r requirements.txt  
  
# Copy the application code  
COPY . .  
  
# Expose the port  
EXPOSE 80  
  
# Run the command to start the development server  
CMD ["python", "app.py"]

## **Step 2: Create a requirements.txt file**

Create a new file named requirements.txt in the root directory of your project with the following contents:

requests

## **Step 3: Build the Docker Image**

Run the following command to build the Docker image:

docker build -t profile-management-api .

## **Step 4: Run the Docker Container**

Run the following command to start a new container from the built image:

docker run -p 80:80 profile-management-api

## **Step 5: Test the API**

Use a tool like curl to test the API endpoints. For example, to update a profile:

curl -X PUT -H "Content-Type: application/json" -d '{"name": "John Doe", "email": "johndoe@example.com"}' http://localhost:80/update/123

And to retrieve a profile:

curl -X GET http://localhost:80/123

## **Step 6: Push the Image to a Registry (Optional)**

If you want to deploy the API to a cloud platform or a container orchestration tool, you'll need to push the image to a registry like Docker Hub. Run the following command to tag and push the image:

docker tag profile-management-api:latest <your-docker-hub-username>/profile-management-api:latest  
docker push <your-docker-hub-username>/profile-management-api:latest

## **Step 7: Deploy to a Cloud Platform or Container Orchestration Tool (Optional)**

Follow the instructions for your chosen cloud platform or container orchestration tool to deploy the API. For example, you can use Kubernetes to deploy the API to a cluster:

kubectl create deployment profile-management-api --image=<your-docker-hub-username>/profile-management-api:latest  
kubectl expose deployment profile-management-api --type=LoadBalancer --port=80

Note: This is just a basic example, and you may need to modify the Dockerfile and deployment steps to fit your specific use case.

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