Create a Kubernetes deployment and a NodePort service for the smitwaman/fastapi:v1 application within the "fastapi" namespace. Here are the steps:

1. **Create a Namespace**: First, create the "fastapi" namespace if it doesn't already exist:

```
apiVersion: v1
kind: Namespace
metadata:
name: fastapi
Apply it using
kubectl apply -f namespace.yaml.
```

## 2. Create a deployment:

```
apiVersion: apps/v1
kind: Deployment
metadata:
 name: fastapi-deployment
 namespace: fastapi
spec:
 replicas: 3
 selector:
  matchLabels:
    app: fastapi
 template:
  metadata:
    labels:
     app: fastapi
  spec:
    containers:
     - name: fastapi-app
      image: smitwaman/fastapi:v1
```

```
ports:
    - containerPort: 9009

resources:

limits:

cpu: "0.5" # Set CPU limit (adjust as needed)

memory: "256Mi" # Set memory limit (adjust as needed)

Apply it using
kubectl apply -f fastapi-deployment.yaml .
```

**3. Service YAML (fastapi-service.yaml)**: Create a NodePort service YAML file (fastapi-service.yaml) with the following content:

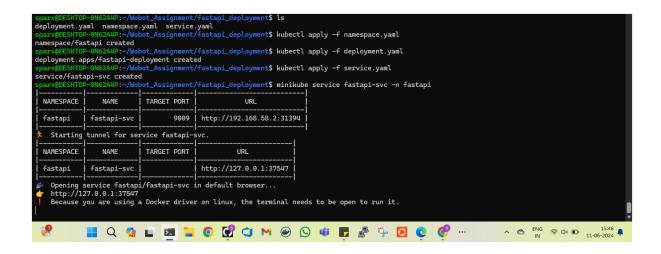
```
apiVersion: v1
kind: Service
metadata:
name: fastapi-svc
namespace: fastapi
spec:
type: LoadBalancer
selector:
app: fastapi
ports:
- protocol: TCP
port: 9009
targetPort: 9009

Apply it using
kubectl apply -f fastapi-service.yaml .
```

## 4. Access the FastAPI Application on minikube in browser:

Run following command

minikube start service fastapi-svc –n fastapi



Here I have edited source code for adding more information

Access URL: http://127.0.0.1:37847

