Cloud Shell commands for deploying containerized application on Google Kubernetes Engine

1. Clone the GitHub repository
   git clone https://github.com/Deep-Joshi/Income-Categorization-based-on-Census-Data.git

2. Set environment variable
   export PROJECT_ID = income-prediction-kubernetes-demo

3. Build docker image and tag it for uploading
   docker build -t deepjoshi/${PROJECT_ID}/income-predition-app:v1 .

4. Authenticate to Google Container Registry
   gcloud auth configure-docker

5. Push the developed image to Google Container Registry
   docker push deepjoshi/${PROJECT_ID}/income-predition-app:v1

6. Setting project ID and compute engine zone options for setting up the cluster
   gcloud config set project $PROJECT_ID
   gcloud config set compute/zone us-central1

7. Create cluster with 2 nodes
   gcloud container clusters create income-prediction-cluster --num-nodes=2

8. Setting up the deployment
   kubectl create deployment income-prediction-application –
   image = deepjoshi/${PROJECT_ID}/income-predition-app:v1

9. Setting up an external IP by exposing ports
   kubectl expose deployment income-prediction-application --type=LoadBalancer --port 80 --target-port 8080

10. Get the service status and external IP that can be used over internet to access the application
    kubectl get service