Accuknox Assignment

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Task 3:

Problem Statement 3 (Technical):

Step #1:

- Create a GoLang Program which reflects the current date & time and host it on GitHub
- Push that code to DockerHub
- In other words: Use docker to create a web application with date & time as the only content

Step #2:

Using the declarative approach to deploy the container with 2 replicas to k8s

Step #3:

Expose the app to the Internet (on WAN)

Resource Hint/Help:

- For k8s resources, you can use Qwiklabs (https://www.qwiklabs.com/ (https://www.qwiklabs.com/)) it gives you around 30 to 60 mins of k8s resources or you can use your own GCP account or any online available platform like https://labs.play-with-k8s.com (https://labs.play-with-k8s.com), etc

Solution:

- **Created a GoLang Program which reflects the Current date and Time and Hosted it on Github.**

```go
package main

import (
    "fmt"
    "net/http"
    "time"
)

func handler(w http.ResponseWriter, r *http.Request) {
    currentTime := time.Now().Format("2006-01-02 15:04:05")
    fmt.Fprintf(w, "Current Date & Time: %s", currentTime)
}

func main() {
    http.HandleFunc("/", handler)
    fmt.Println("Server started on port 8080")
    http.ListenAndServe(":8080", nil)
}

```

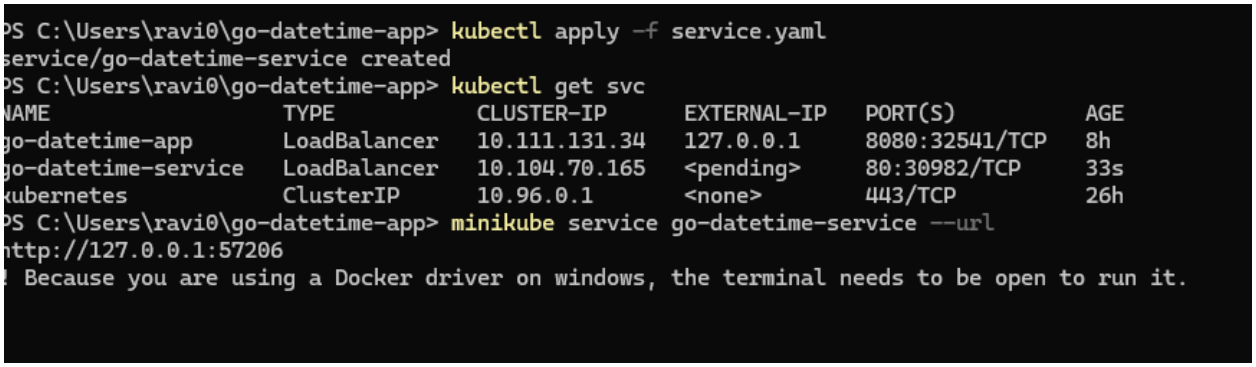
GitHub link: https://github.com/prakashravi5/Accuknox_Assignment

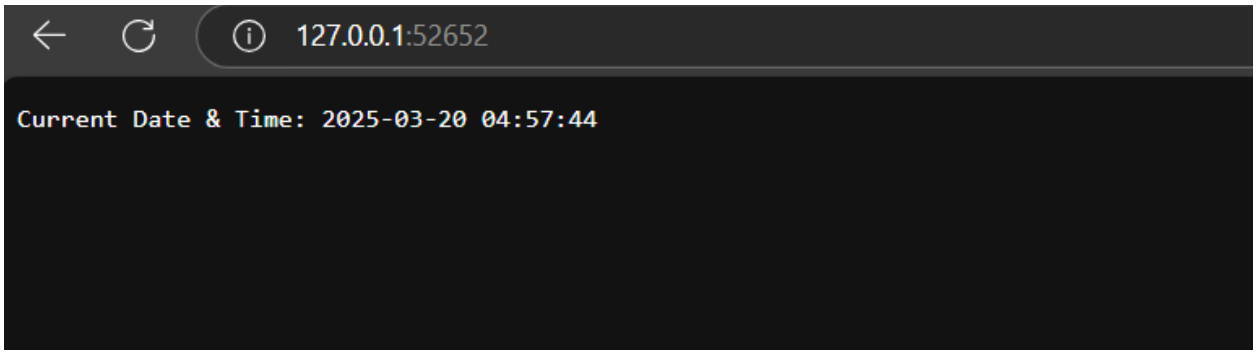
- **Pushed the code to docker.**

  Docker Link:
  https://hub.docker.com/repository/docker/prakashravi7483/go-datetime-app

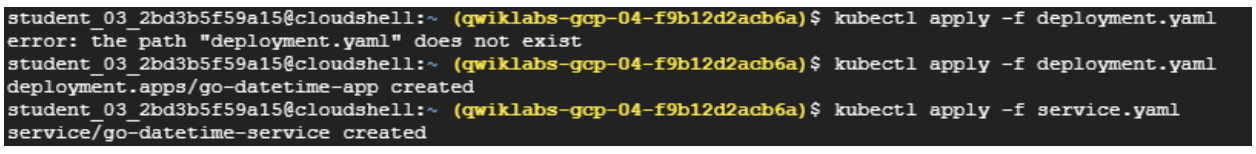
- **Deployed the container with two replicas to a Kubernetes (K8s) cluster using the declarative approach. All files added to github, Deployment.yaml file for 2 replicas and Service.yaml**

- **Screenshot running on local machine using minikube**



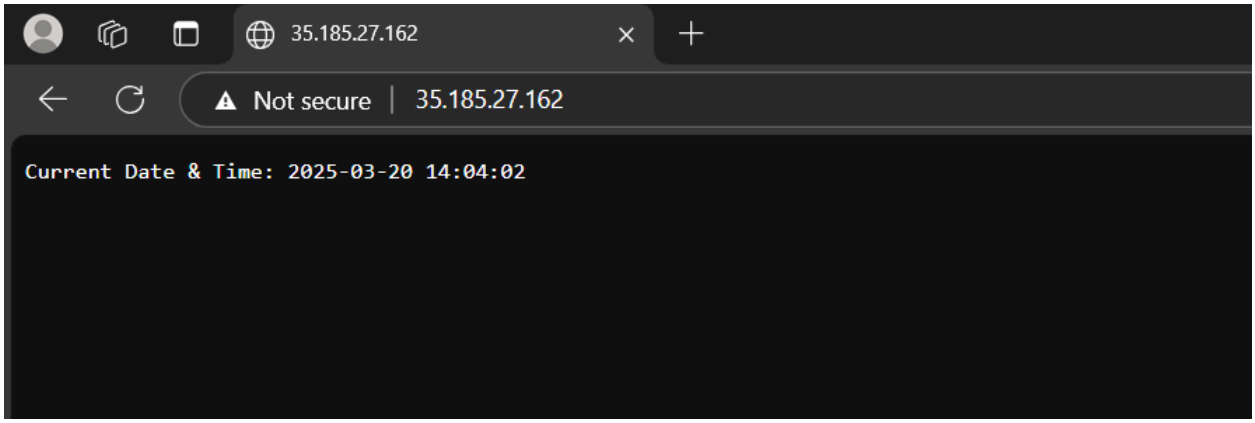


  - **Used Qwiklabs and got the cluster --zone=us-east1-d for 45 min.**
  - **Deployed on GCP.**



```
student_03_2bd3b5f59a15@cloudshell:~ (qwiklabs-gcp-04-f9b12d2acb6a)$ kubectl get svc
NAME                  TYPE           CLUSTER-IP       EXTERNAL-IP     PORT(S)        AGE
go-datetime-service   LoadBalancer   34.118.225.201   35.185.27.162   80:30252/TCP   52s
kubernetes            ClusterIP      34.118.224.1     <none>          443/TCP        8m18s
```

- **Our App is running on GCP Successfully.**



All the files uploaded on git repo.