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Hasura SRE assignment

Problem 1

Deploy an application to kubernetes cluster

1. Create a kubernetes cluster : you can use EKS and terraform/pulumi
2. Deploy production grade Go application (https://github.com/shukla2112/env-echo) to the cluster
3. For env-echo app set ENV `HASURA_MY_ENV` value to k8s secret
4. Create the helm chart for deploying the application
5. Use nginx ingress controller to manage ingress inside kube cluster

Problem 2

Automate the secret updates in kubernetes and checkin securely

write a script which takes secret - key/value as input for the service and upload the encrypted version to github

Key/Pair can be existing or the new one, in case of existing one - update or in case it's new, add new key/pair value

Input for script -

- key/value for secret in plain text
- service name
- new/update existing

Output

- encrypted secret in github
- kubernetes secret updated
- Deployment updated with new secret

i.e. -

```
./manage-secrets  --key HASURA_TEST --value TEST_SECRET --service env-echo --existing fals
e
```

sample secret file

- username : admin
- password : 1f2d1e2e67df

```
apiVersion: v1
kind: Secret
metadata:
  name: mysecret
type: Opaque
data:
  username: YWRtaW4=
  password: MWYyZDFlMmU2N2Rm
  HASURA_TEST: dGVzdC12YWx1ZQo=
```

Notes

- Secrets in k8s are stored in base64 encoded format
- Encrypt the file to make sure no visibility in github for security
- Update existing - you need to get the latest file and decrypt it