

1. Kubernetes Commands and Interaction Process

Step 1: Check Pod Status

kubectl get pods

```
PS F:\海外留学相关\Deakin Year4 Tasks and Assignments\SIT323\7.1P>
● kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
calculator-deployment-75dc5b78cf-ftkhc 1/1     Running   0          54m
○ PS F:\海外留学相关\Deakin Year4 Tasks and Assignments\SIT323\7.1P>
```

Step 2: Check Service Status

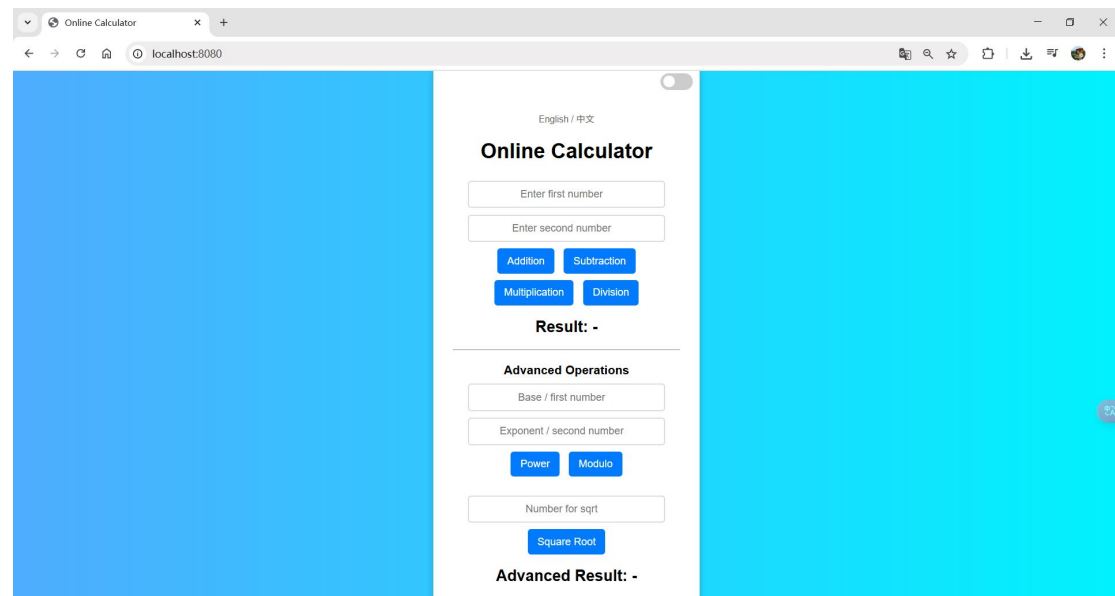
kubectl get services

```
PS F:\海外留学相关\Deakin Year4 Tasks and Assignments\SIT323\7.1P> kubectl get services
NAME             TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)          AGE
calculator-service NodePort    10.98.207.133 <none>        80:30036/TCP     84m
kubernetes        ClusterIP   10.96.0.1    <none>        443/TCP          87m
PS F:\海外留学相关\Deakin Year4 Tasks and Assignments\SIT323\7.1P>
```

Step 3: Access the Application Using kubectl port-forward

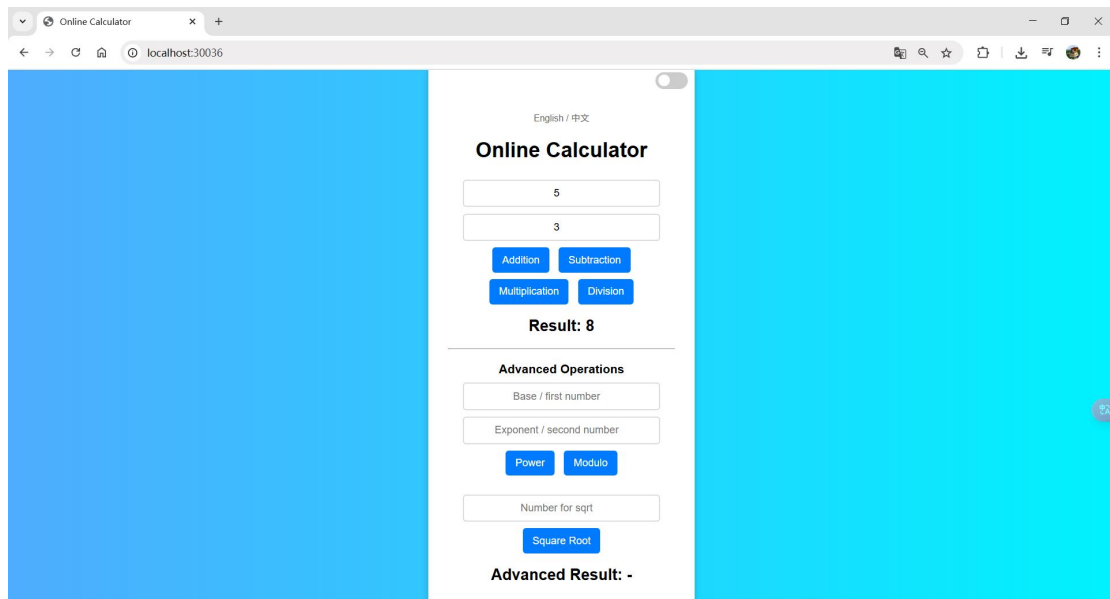
kubectl port-forward pod/calculator-deployment-75dc5b78cf-ftkhc 8080:3000

```
PS F:\海外留学相关\Deakin Year4 Tasks and Assignments\SIT323\7.1P> kubectl port-forward pod/calculator-deployment-75dc5b78cf-ftkhc 8080:3000
Forwarding from 127.0.0.1:8080 -> 3000
Forwarding from [::1]:8080 -> 3000
```

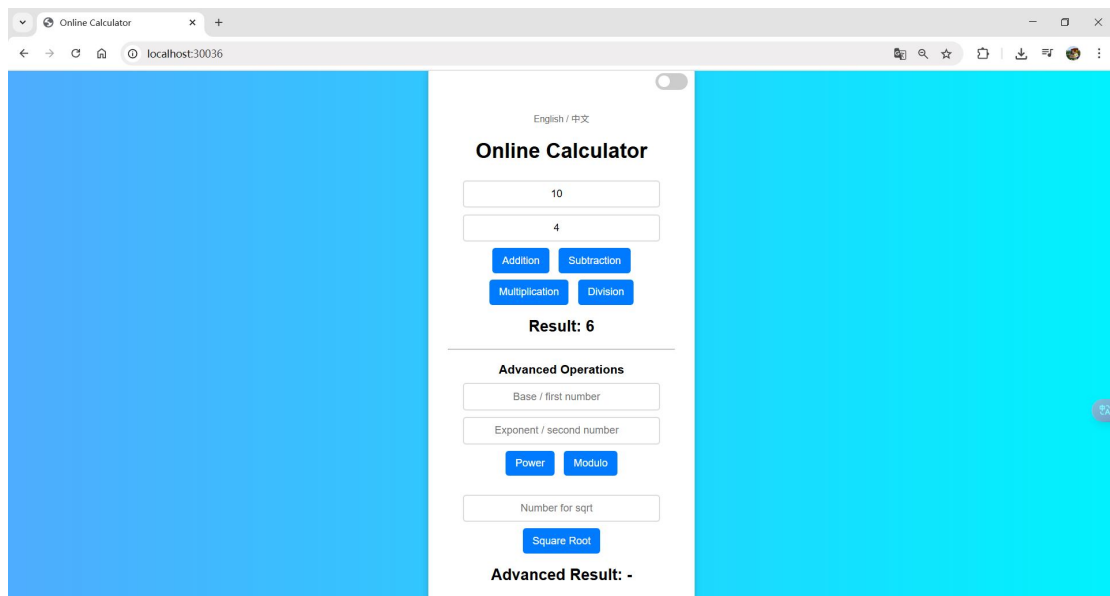


2. Application Functional Testing

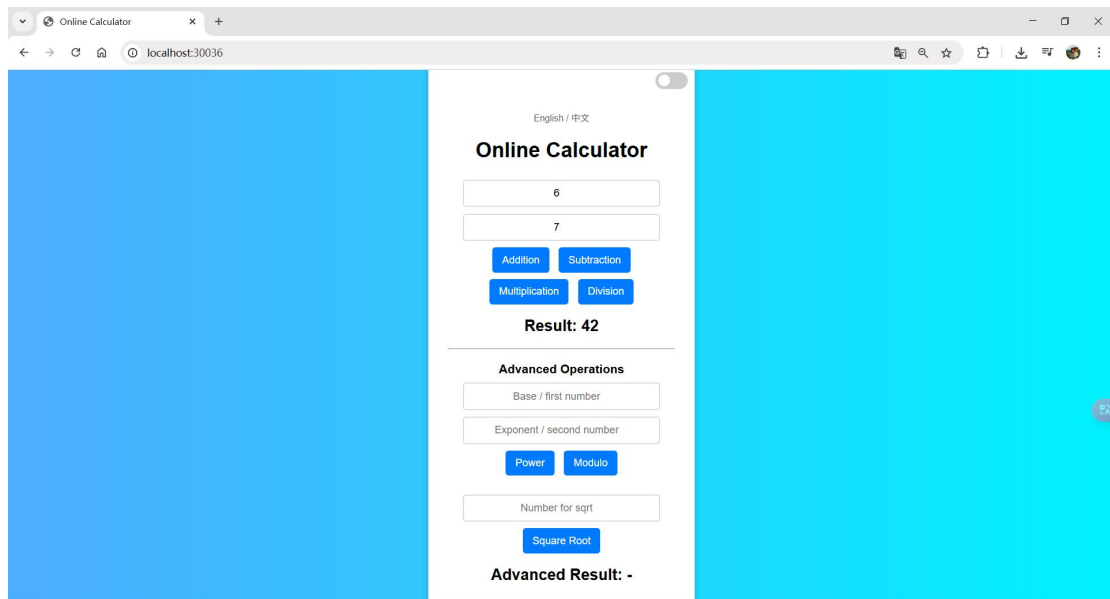
Addition



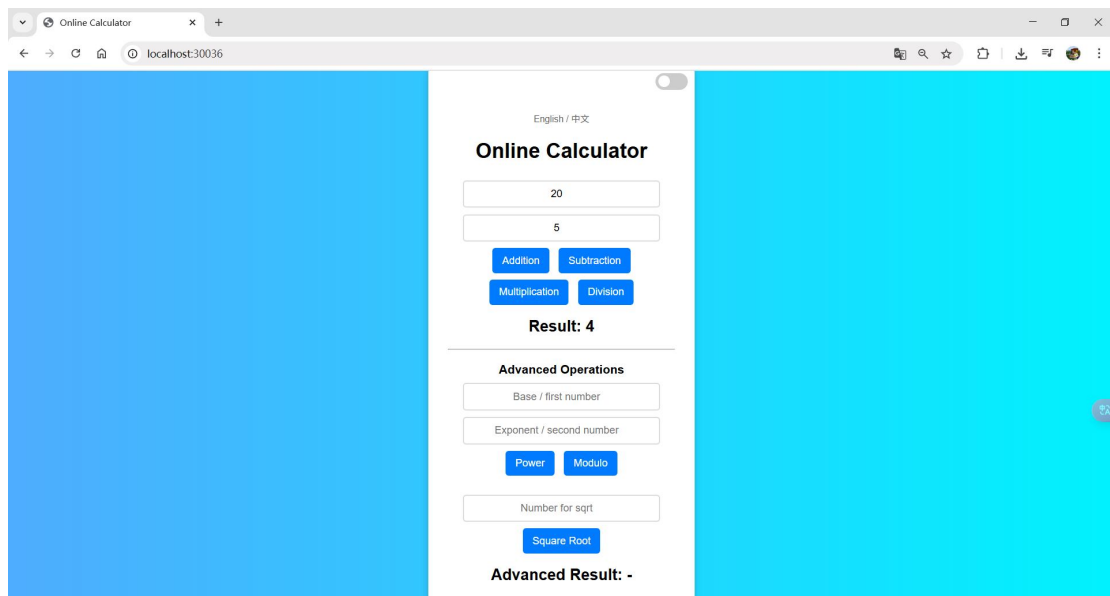
Subtraction



Multiplication



Division



Power

Online Calculator

localhost:30036

English / 中文

Online Calculator

Addition

Subtraction

Multiplication

Division

Result: -

Advanced Operations

Power

Modulo

Square Root

Advanced Result: 16

Modulo

Online Calculator

localhost:30036

English / 中文

Online Calculator

Addition

Subtraction

Multiplication

Division

Result: -

Advanced Operations

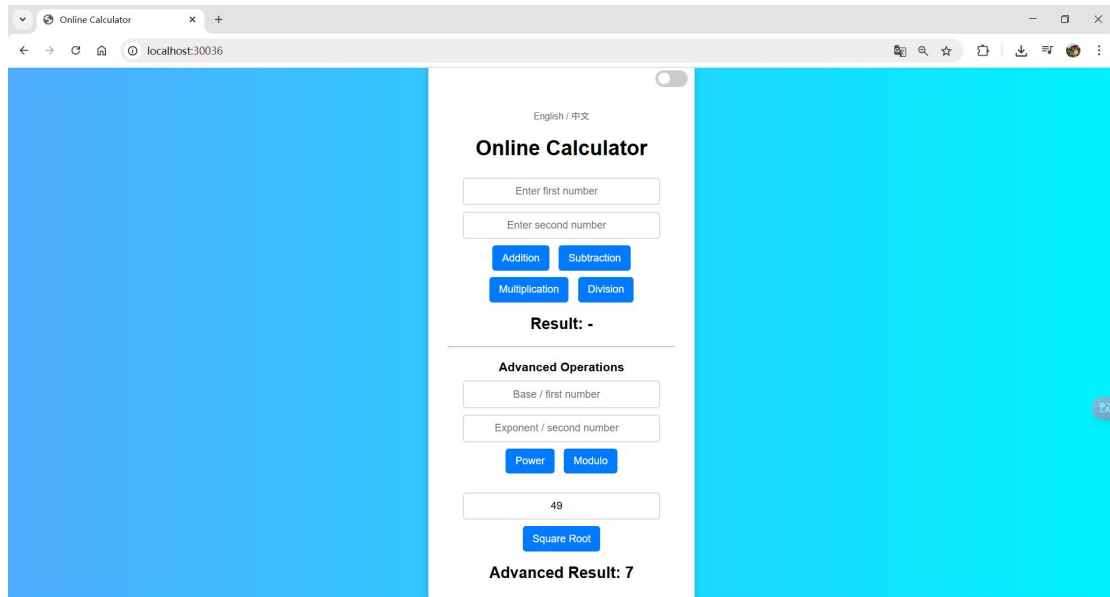
Power

Modulo

Square Root

Advanced Result: 1

Square Root



Github Link: <https://github.com/Lonely-DM/SIT323/tree/main/6.2C/sit323-2025-prac6c>