

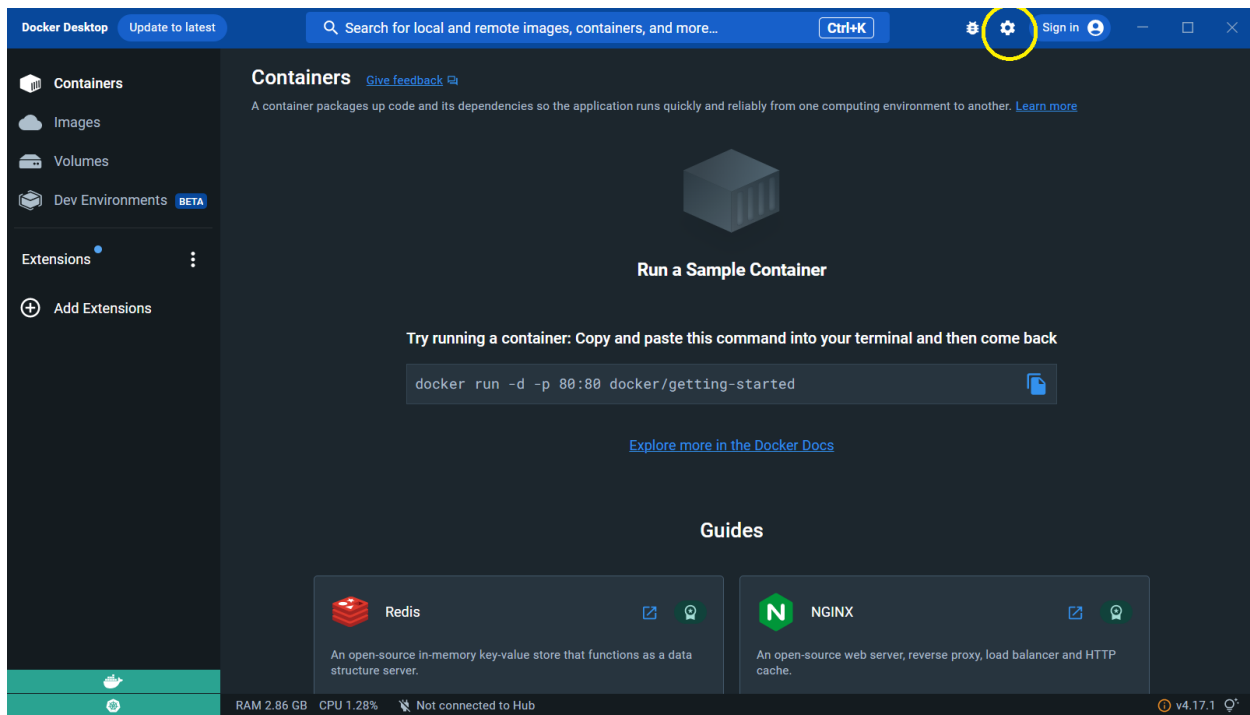
# Student Enrollment System – Installation Guide

Disclaimer: this guide assumes the user has Docker Desktop installed and properly configured on their machine. If this application is not available, it can be downloaded via this link:

<https://www.docker.com/products/docker-desktop/>

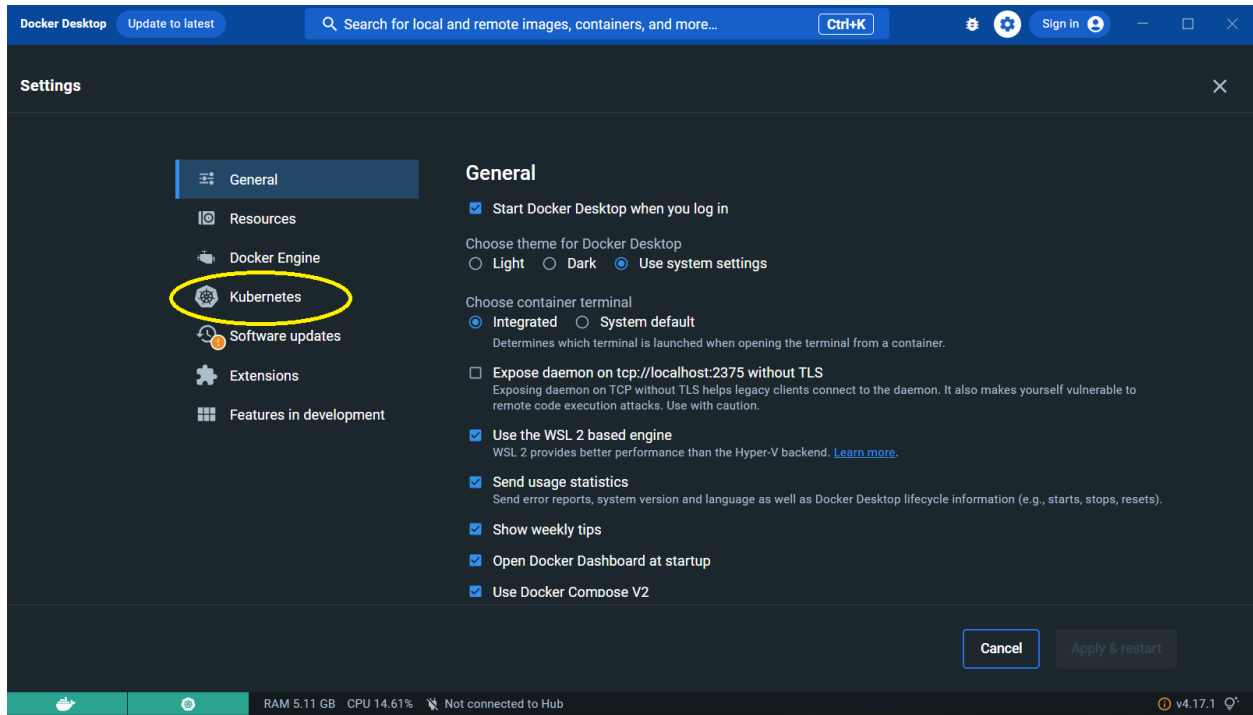
## Step 1:

**Open Docker Desktop** and **navigate to the Settings menu** by clicking on the gear icon located on the **upper right-hand side of the window**.



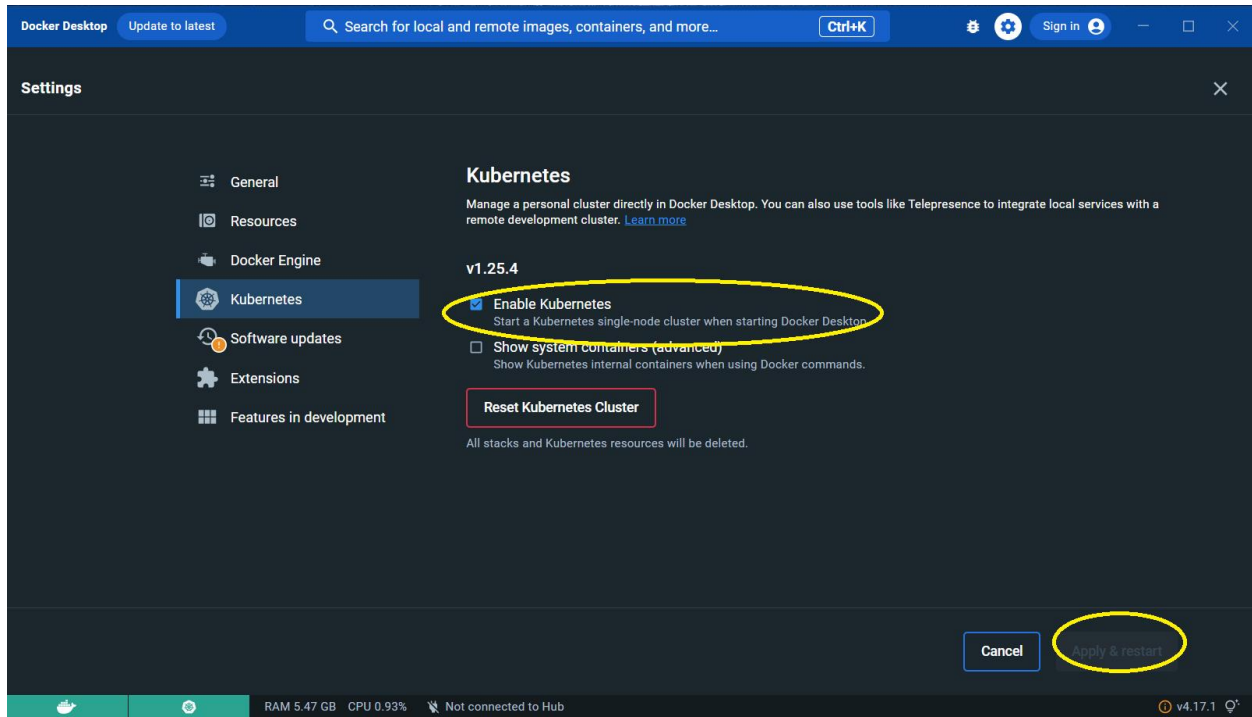
## Step 2:

In the Settings menu, **select Kubernetes on the sidebar menu on the left.**



### Step 3:

Verify that Kubernetes is enabled by checking if the box next to the Enable Kubernetes option is ticked. If not, tick the box and click Apply & Restart. This step may take a few minutes.

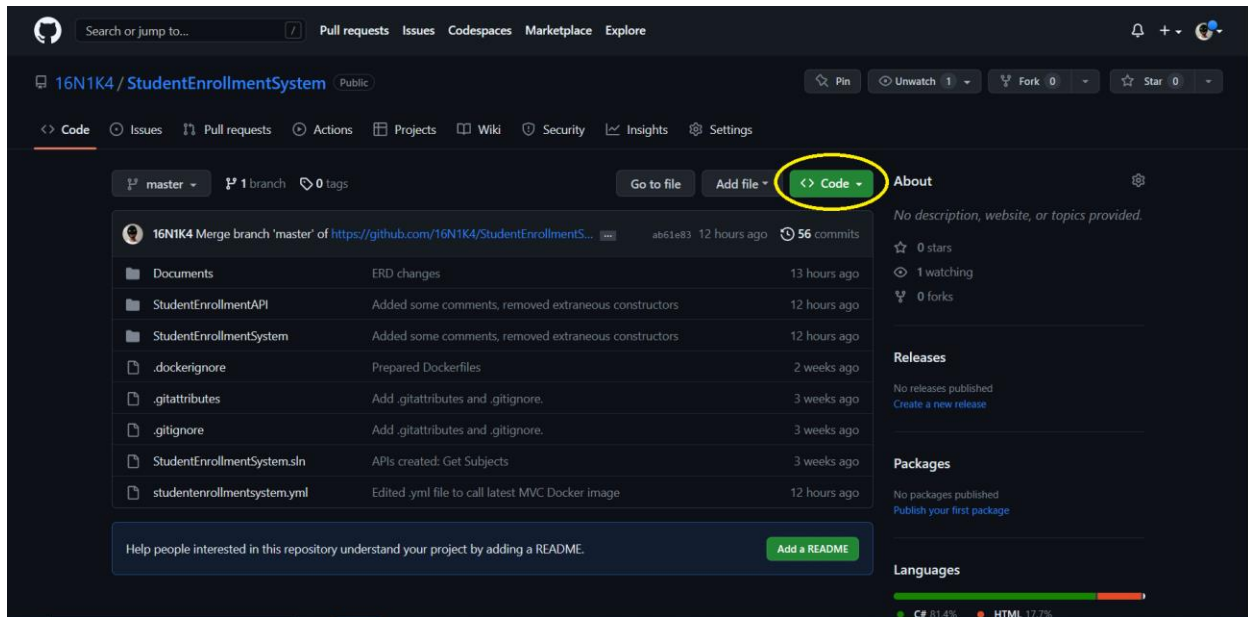


#### Step 4:

Once Kubernetes is running, **visit the following URL** on your web browser:

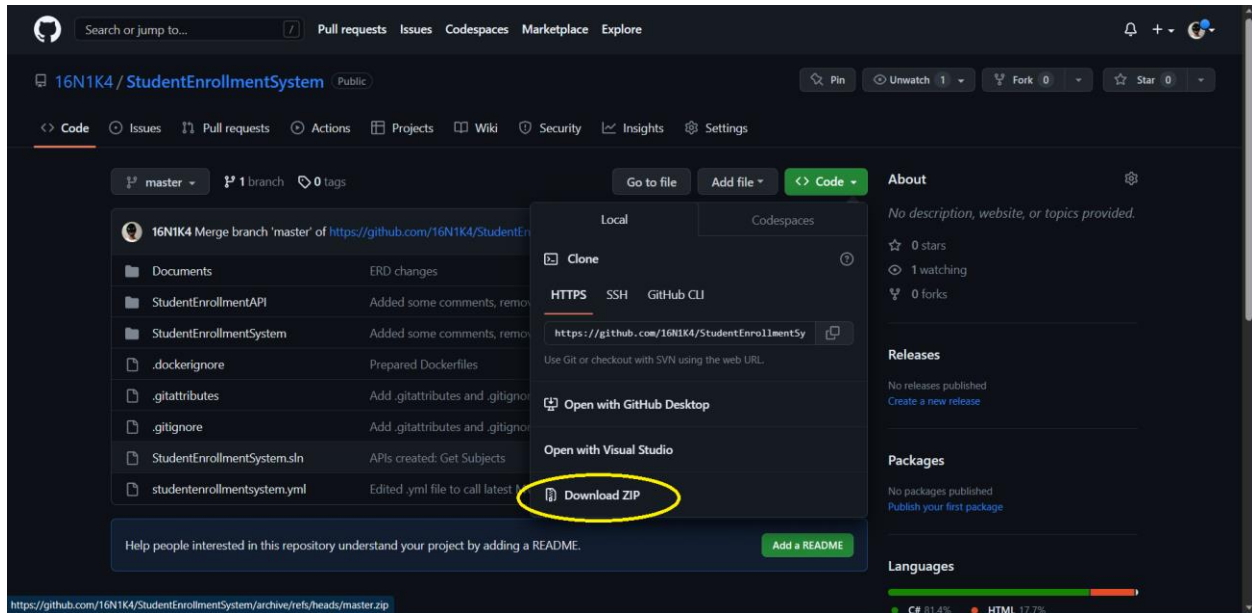
<https://github.com/16N1K4/StudentEnrollmentSystem>. This is the repository containing all the files related to the Student Enrollment System project.

The browser will load the following page. Here, **click on the green Code button**.



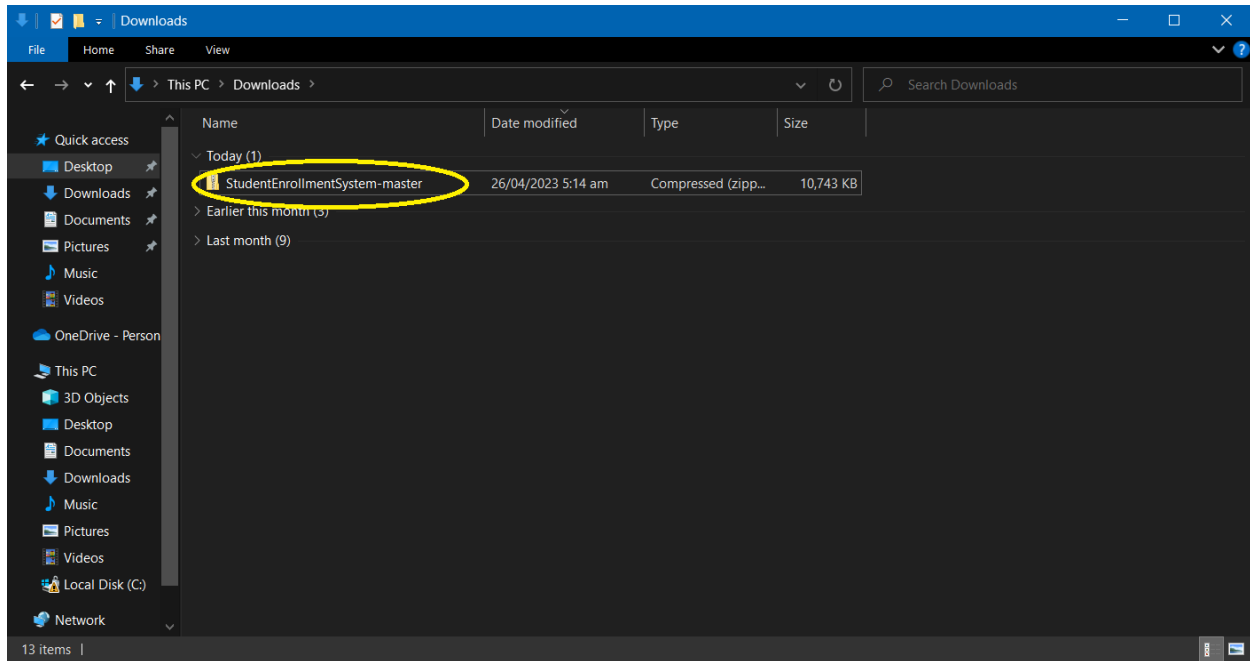
## Step 5:

Upon clicking the button, a small menu will pop up. Here, select **Download ZIP**. This will initiate a download of a ZIP file containing everything in the Github repository.



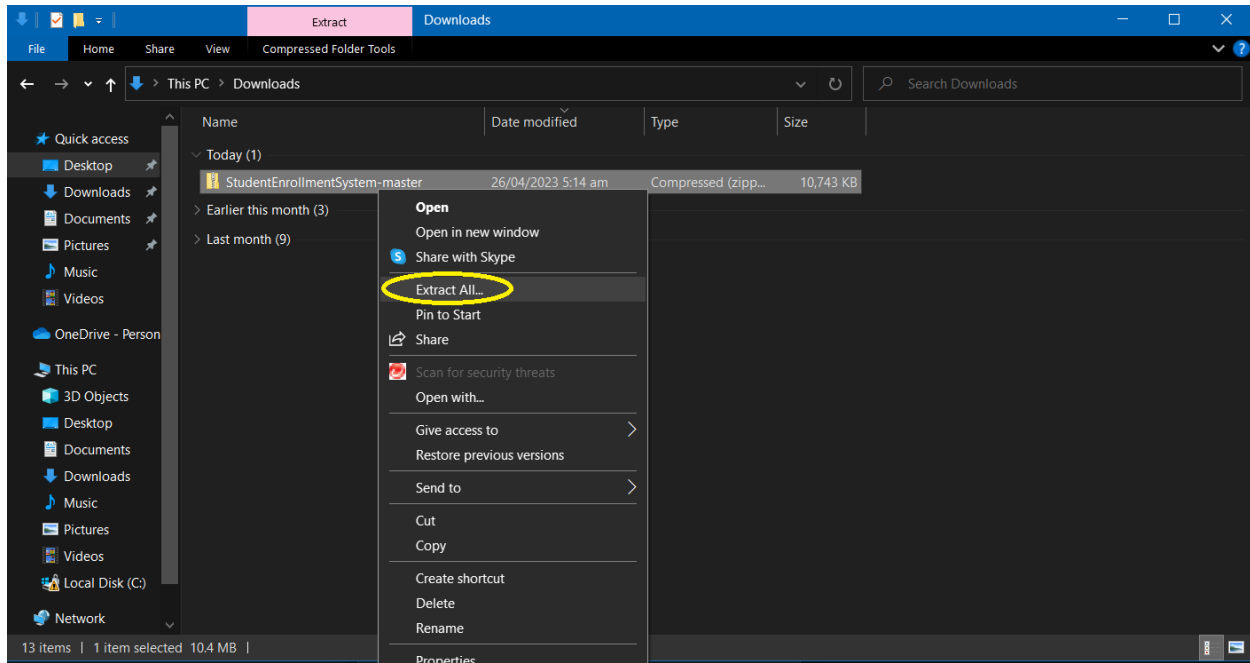
## Step 6:

Open the **Downloads** folder (C:\Users\[User]\Downloads) in File Explorer. You should be able to see the newly-downloaded ZIP file here (named **StudentEnrollmentSystem-master**).



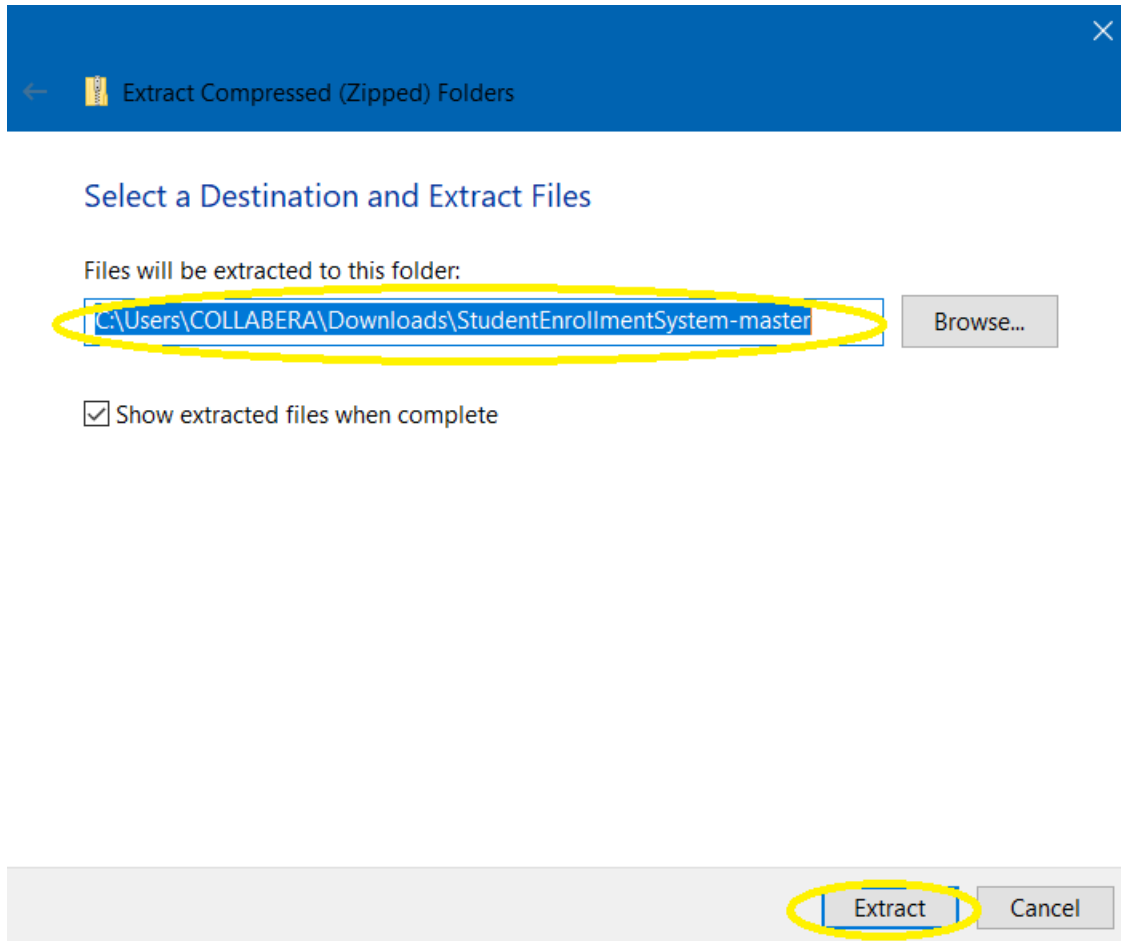
## Step 7:

**Right-click on StudentEnrollmentSystem-master. Select Extract All.** This will open a new window.



### Step 8:

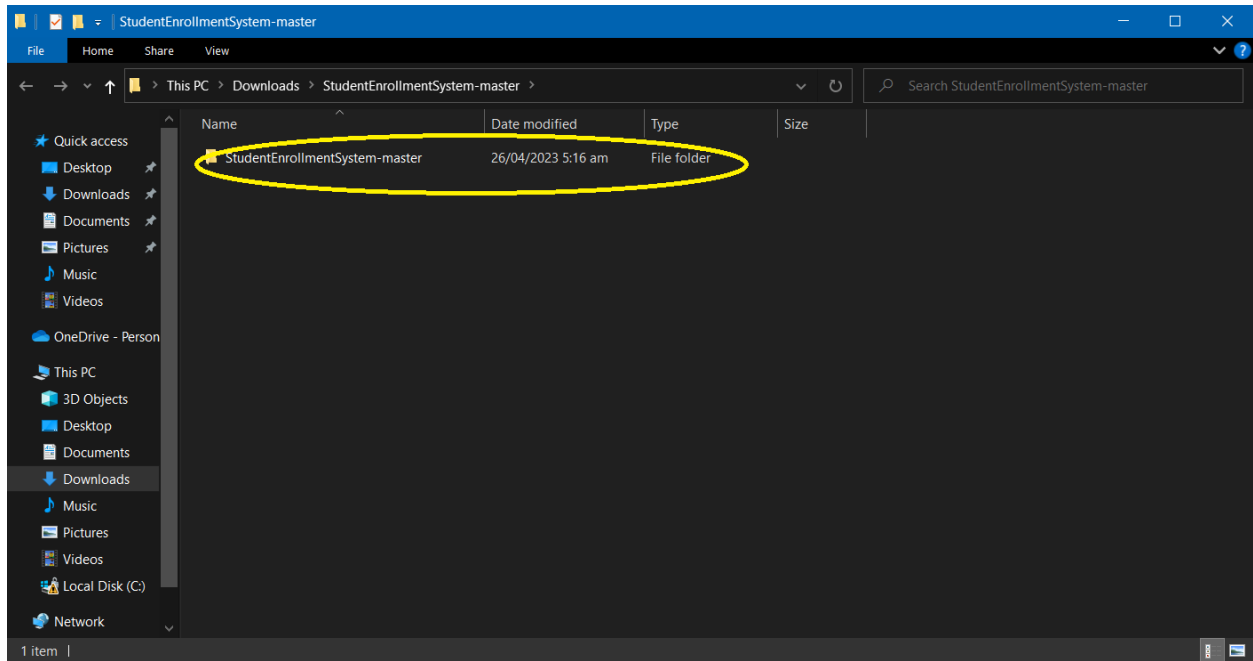
In this **new window**, you will be prompted to select a destination to which the files of the ZIP will be extracted. You may select a folder of your choice, but for this example, **extract the ZIP to the default folder** (C:\Users\[User]\StudentEnrollmentSystem-master). Doing this will also open the destination folder in File Explorer.





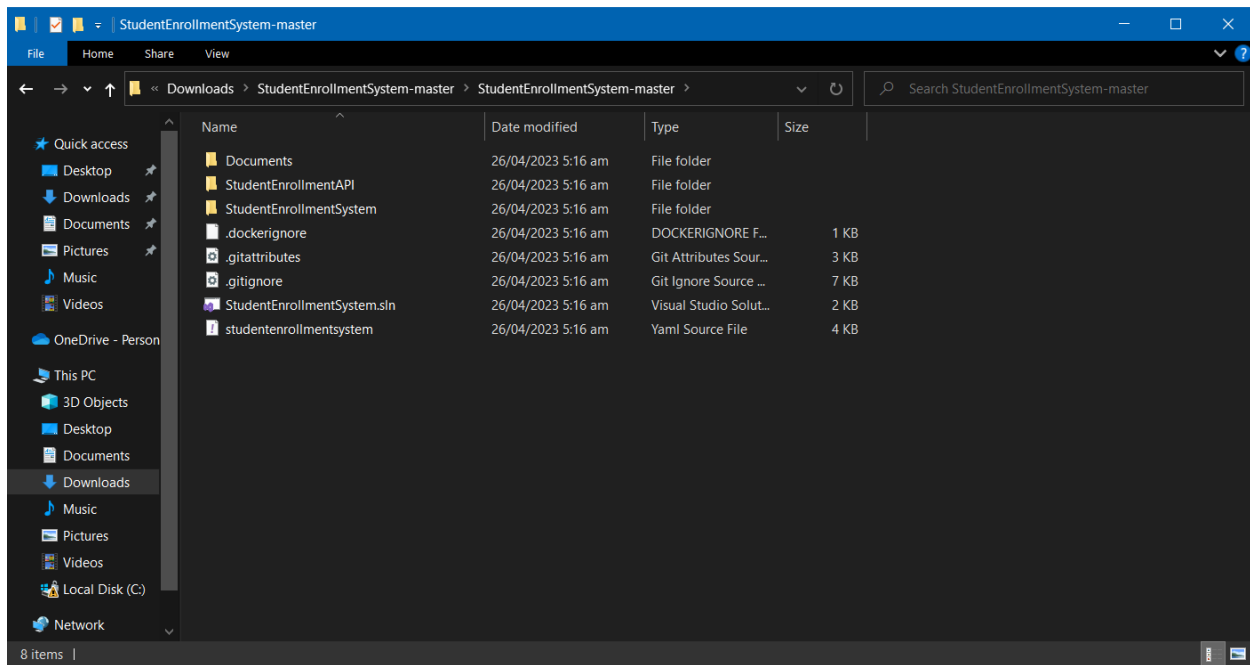
### Step 9:

The newly-opened window in File Explorer will contain a single folder also named **StudentEnrollmentSystem-master**. Open this folder.



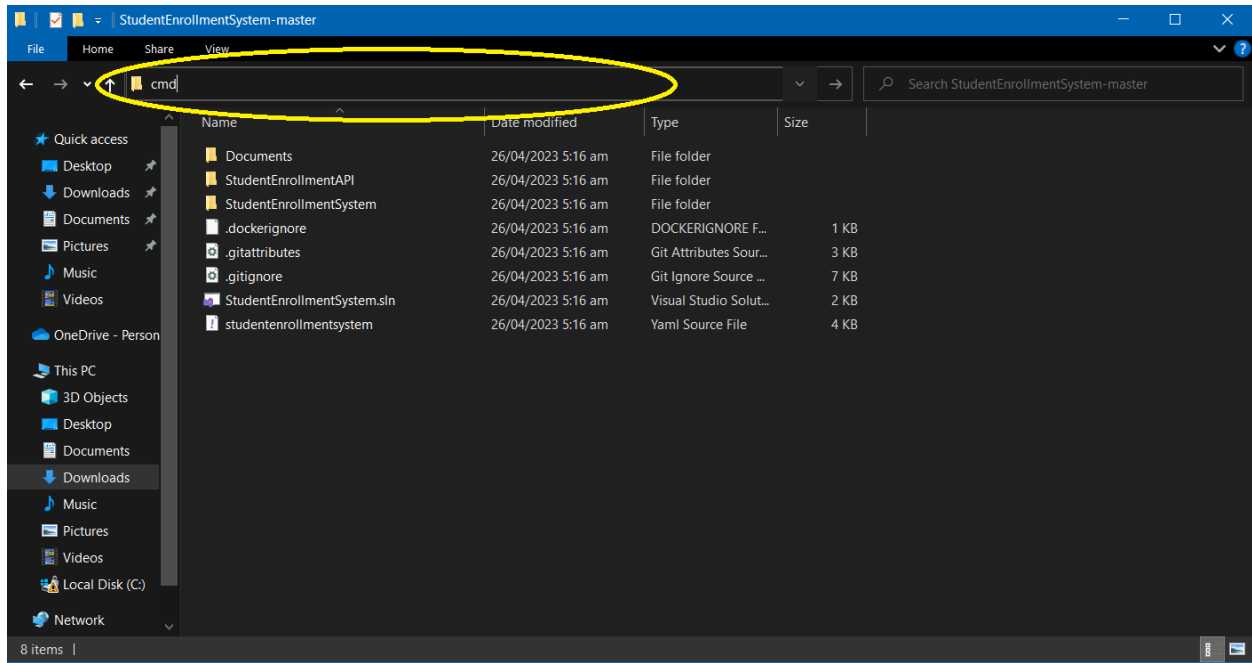
## Step 10:

You are now in the root folder of the Student Enrollment System project. Several files (exactly the same as what is initially displayed in this project's Github page) will be visible. Note the presence of **studentenrollmentsystem.yml** in this folder. This is the configuration file required to run the project.



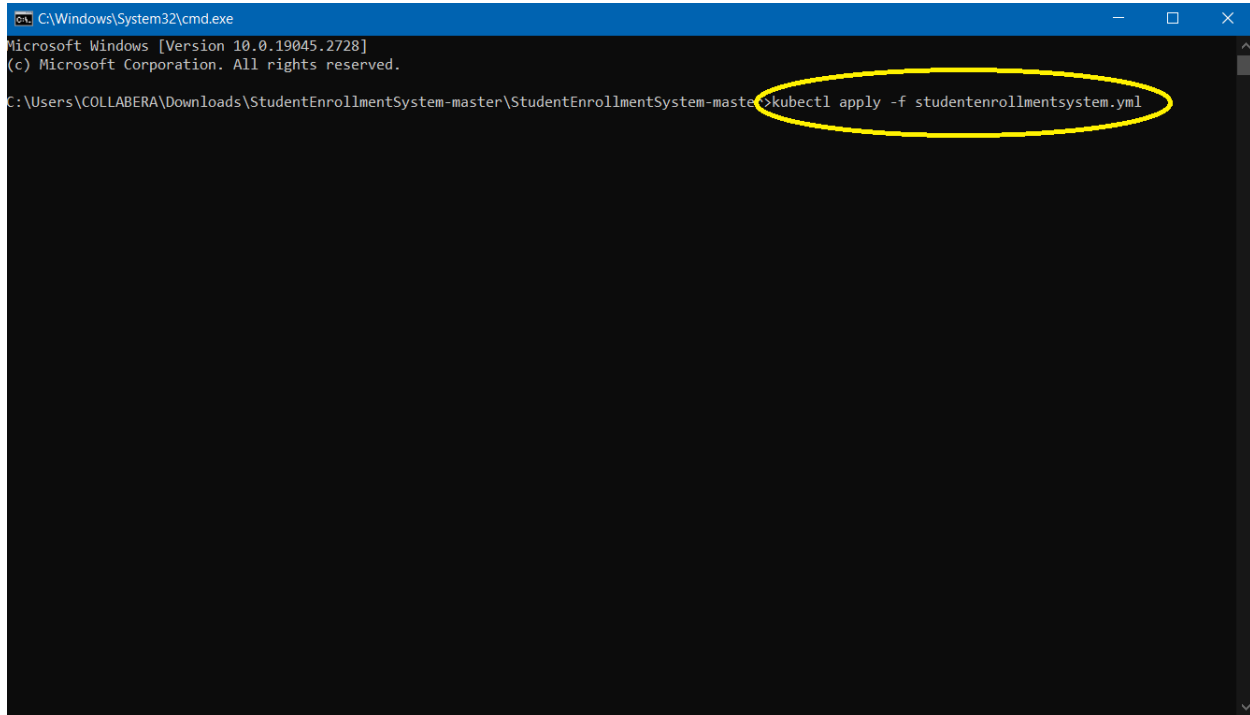
### Step 11:

While in this window, **click on the location bar on the upper portion**. Replace the text by **typing “cmd”**. This will open a Command Prompt window.



### Step 12:

In this Command Prompt window, **type this exact command: `kubectl apply -f studentenrollmentsystem.yml`**

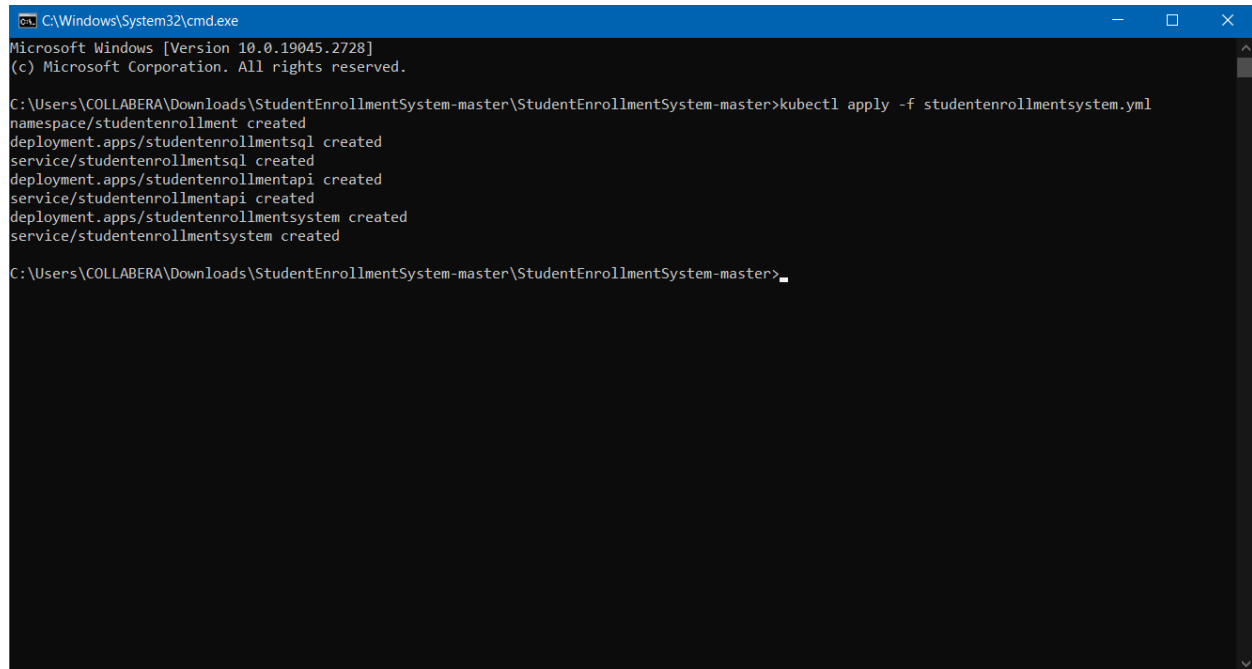
A screenshot of a Windows Command Prompt window. The title bar at the top reads 'C:\Windows\System32\cmd.exe'. The window content shows the following text: 'Microsoft Windows [Version 10.0.19045.2728]', '(c) Microsoft Corporation. All rights reserved.', and the command prompt 'C:\Users\COLLABERA\Downloads\StudentEnrollmentSystem-master\StudentEnrollmentSystem-master>'. The command 'kubectl apply -f studentenrollmentsystem.yml' is being typed at the prompt and is circled in yellow. The background of the command prompt is black, and the text is white. The window has standard Windows window controls (minimize, maximize, close) in the top right corner.

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19045.2728]
(c) Microsoft Corporation. All rights reserved.

C:\Users\COLLABERA\Downloads\StudentEnrollmentSystem-master\StudentEnrollmentSystem-master>kubectl apply -f studentenrollmentsystem.yml
```

### Step 13:

**Hitting enter** will run the command. You should see the following lines in the Command Prompt. If Docker Desktop is not on and Kubernetes is not enabled, this will not work.



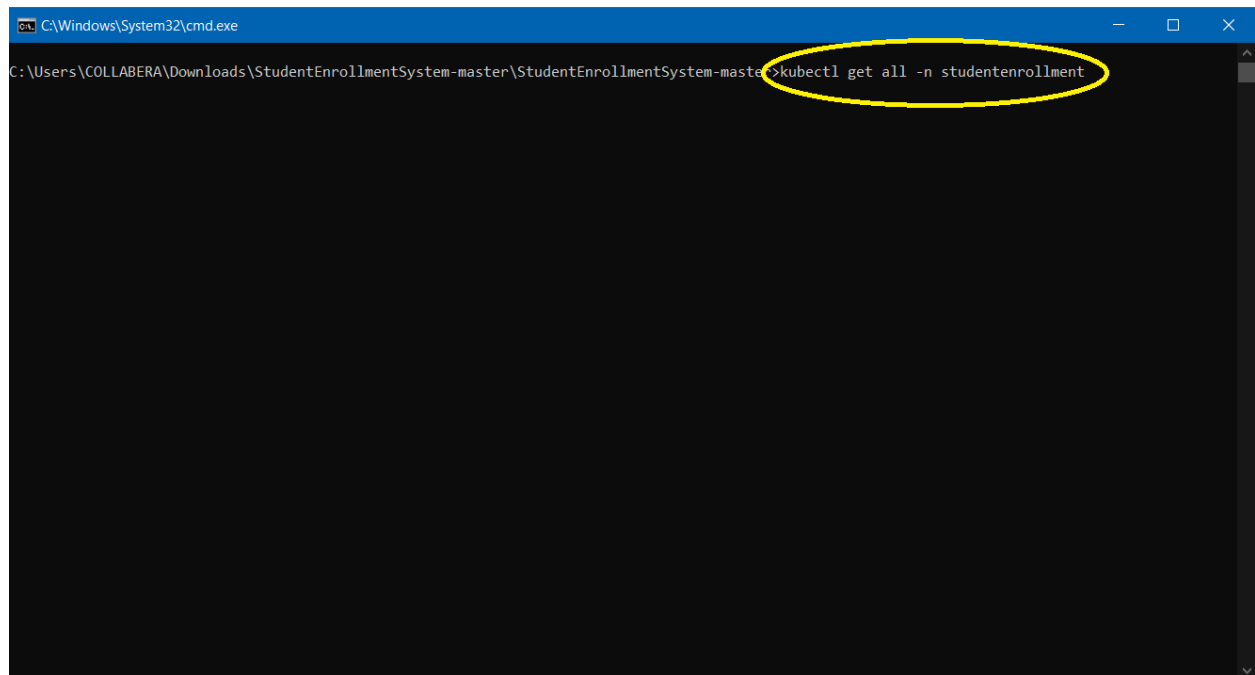
```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19045.2728]
(c) Microsoft Corporation. All rights reserved.

C:\Users\COLLABERA\Downloads\StudentEnrollmentSystem-master\StudentEnrollmentSystem-master>kubectl apply -f studentenrollmentsystem.yml
namespace/studentenrollment created
deployment.apps/studentenrollmentsql created
service/studentenrollmentsql created
deployment.apps/studentenrollmentapi created
service/studentenrollmentapi created
deployment.apps/studentenrollmentsystem created
service/studentenrollmentsystem created

C:\Users\COLLABERA\Downloads\StudentEnrollmentSystem-master\StudentEnrollmentSystem-master>
```

#### Step 14:

At this point, the system is already running, but **you will still need the port numbers** for the API and MVC applications respectively in order to use them. **To fetch the port numbers, type this exact command** in the Command Prompt window: **kubectl get all -n studentenrollment**



```
C:\Windows\System32\cmd.exe
C:\Users\COLLABERA\Downloads\StudentEnrollmentSystem-master\StudentEnrollmentSystem-master>kubectl get all -n studentenrollment
```

Step 15:

**Hit enter** to run the command. The following should appear on the Command Prompt window.

Here, you can verify that every aspect of the system is running by **checking the STATUS column** (every item should say “Running”).

**The port numbers you need** to access each application will be in the **PORT(s) column**.

Specifically, you will be using the **number on the right-hand side of the colon**. In the below example, the API (the top row) will be available at localhost:32402, and the MVC application (the bottom row) will be available at localhost:31325.

For more in-depth information on how to run and use each application, please refer to their respective technical manuals and user manuals (located in the **StudentEnrollmentSystem/Documents** folder).

```
C:\Windows\System32\cmd.exe

C:\Users\COLLABERA\Downloads\StudentEnrollmentSystem-master\StudentEnrollmentSystem-master>kubectl get all -n studentenrollment

NAME                                READY    STATUS    RESTARTS   AGE
pod/studentenrollmentapi-6cf4f6587-98n4j    1/1      Running   0          77s
pod/studentenrollmentsql-7fd7d76b8c-9gljw    1/1      Running   0          77s
pod/studentenrollmentsystem-5c69d74cf5-7f898  1/1      Running   0          77s

NAME                                TYPE        CLUSTER-IP    EXTERNAL-IP    PORT(S)          AGE
service/studentenrollmentapi        NodePort    10.97.122.187 <none>         5010:32402/TCP   77s
service/studentenrollmentsql        ClusterIP   10.102.246.60 <none>         1433/TCP         77s
service/studentenrollmentsystem      NodePort    10.109.225.126 <none>         5124:31325/TCP   77s

NAME                                READY    UP-TO-DATE    AVAILABLE    AGE
deployment.apps/studentenrollmentapi  1/1      1              1            77s
deployment.apps/studentenrollmentsql  1/1      1              1            77s
deployment.apps/studentenrollmentsystem 1/1      1              1            77s

NAME                                DESIRED    CURRENT    READY    AGE
replicaset.apps/studentenrollmentapi 1          1          1        77s
replicaset.apps/studentenrollmentsql  1          1          1        77s
replicaset.apps/studentenrollmentsystem 1          1          1        77s

C:\Users\COLLABERA\Downloads\StudentEnrollmentSystem-master\StudentEnrollmentSystem-master>
```