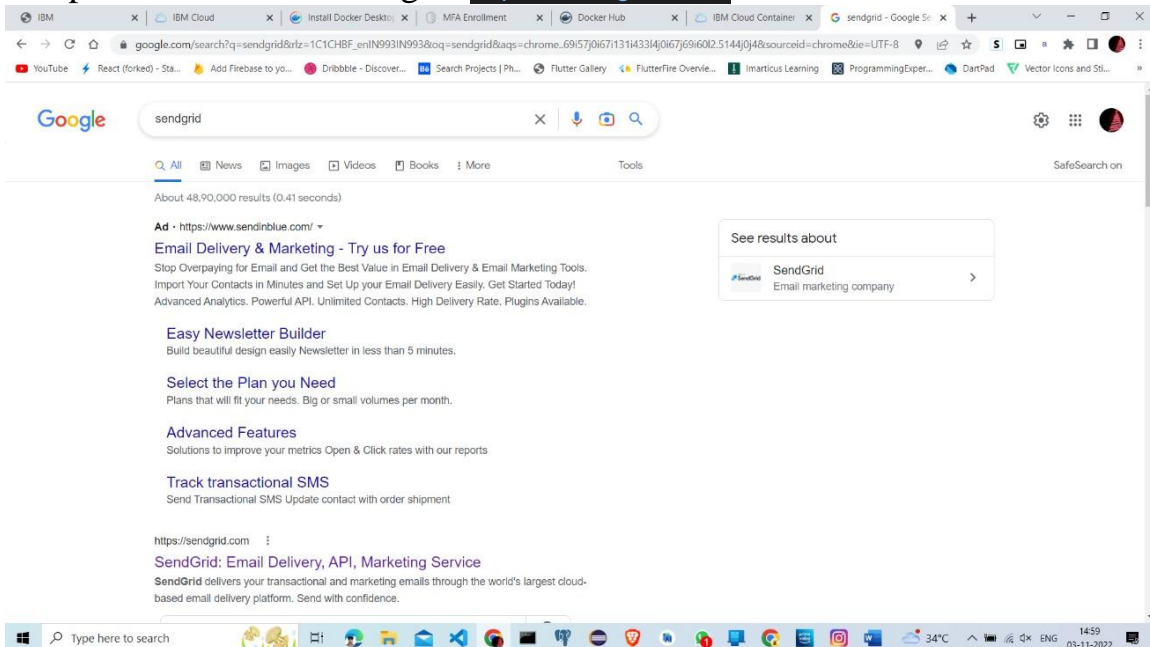


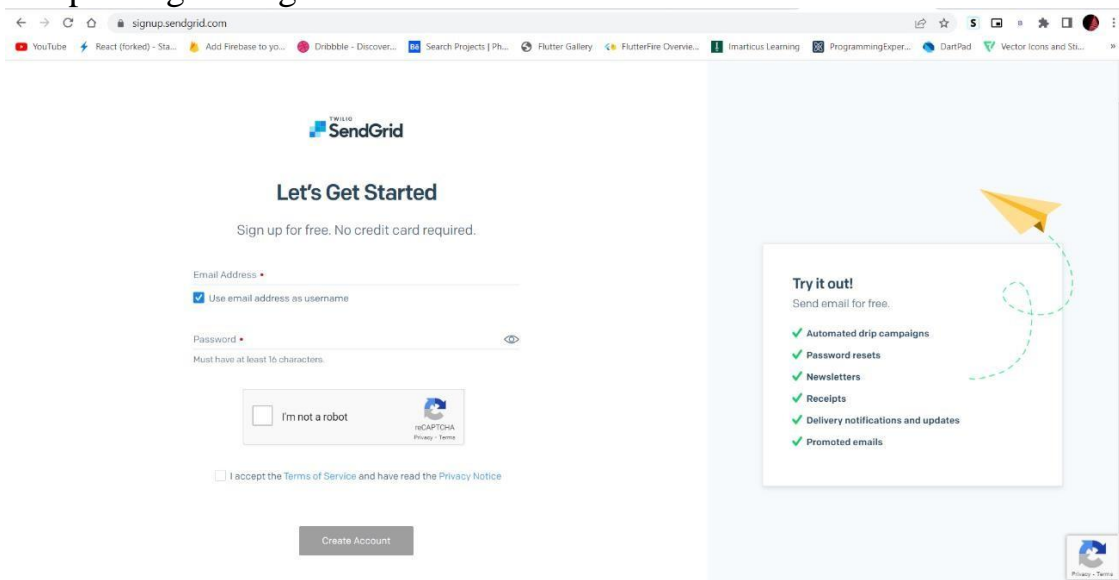
# SETTING UP APPLICATION ENVIRONMENT

## 1. SENDGRID ACCOUNT CREATION:

Step 1: Search for the sendgrid <https://sendgrid.com/>

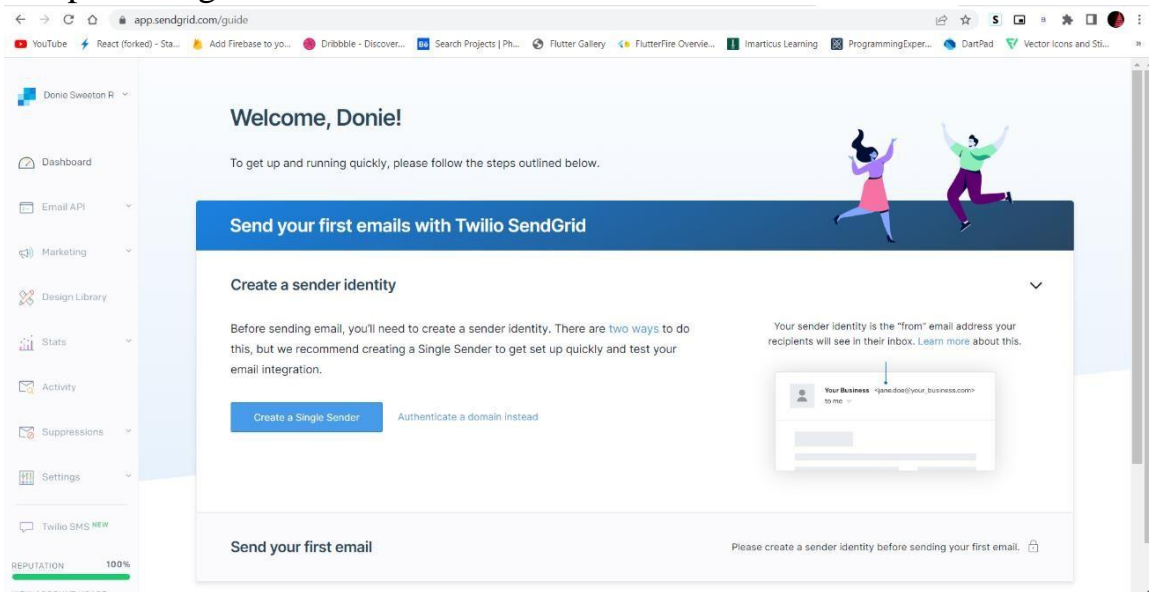


Step 2: Registering new account



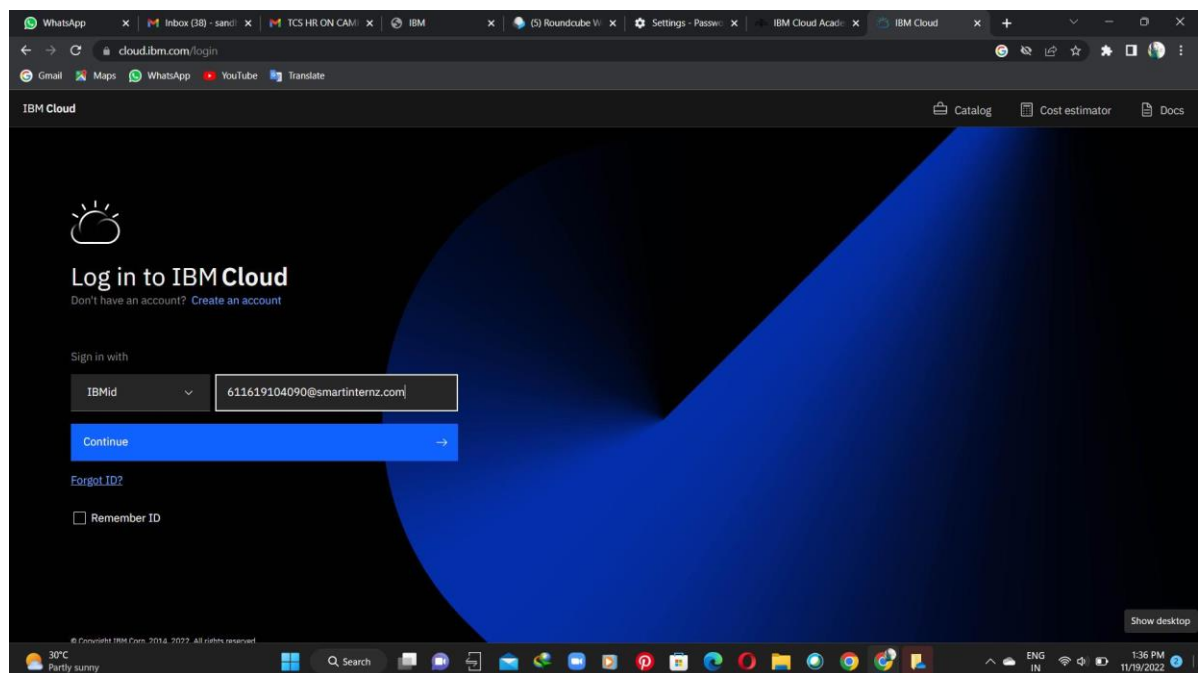
# SETTING UP APPLICATION ENVIRONMENT

## Step 3: Sendgrid account created



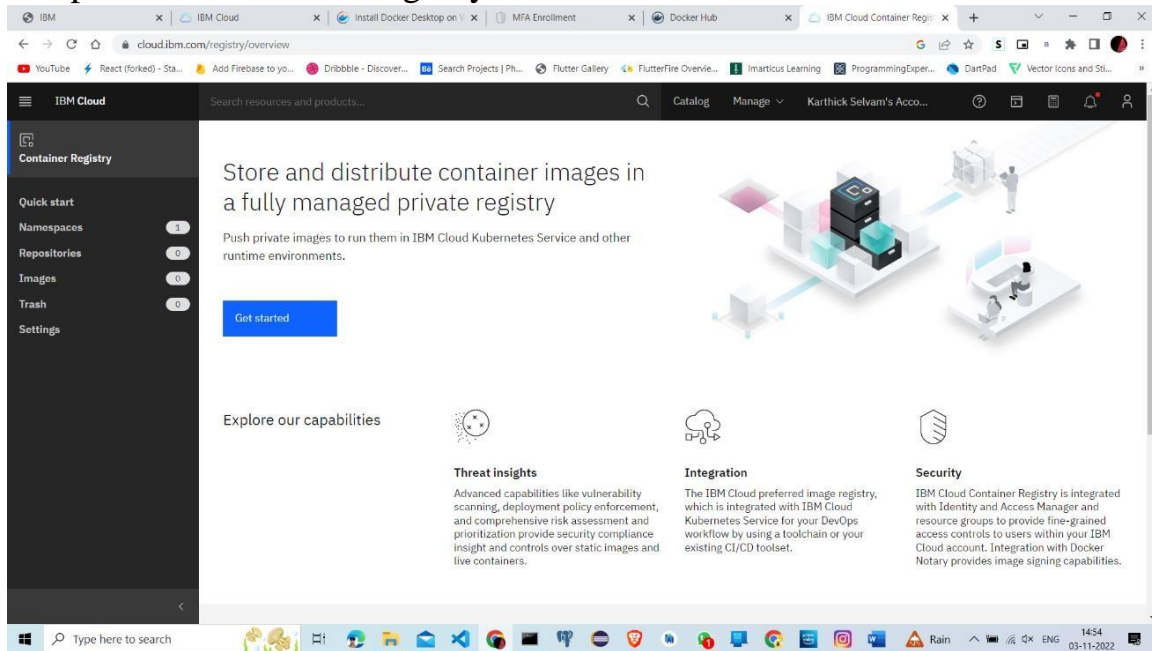
## 2. IBM CLOUD CLI INSTALLATION:

### Step1: in to the IBM cloud

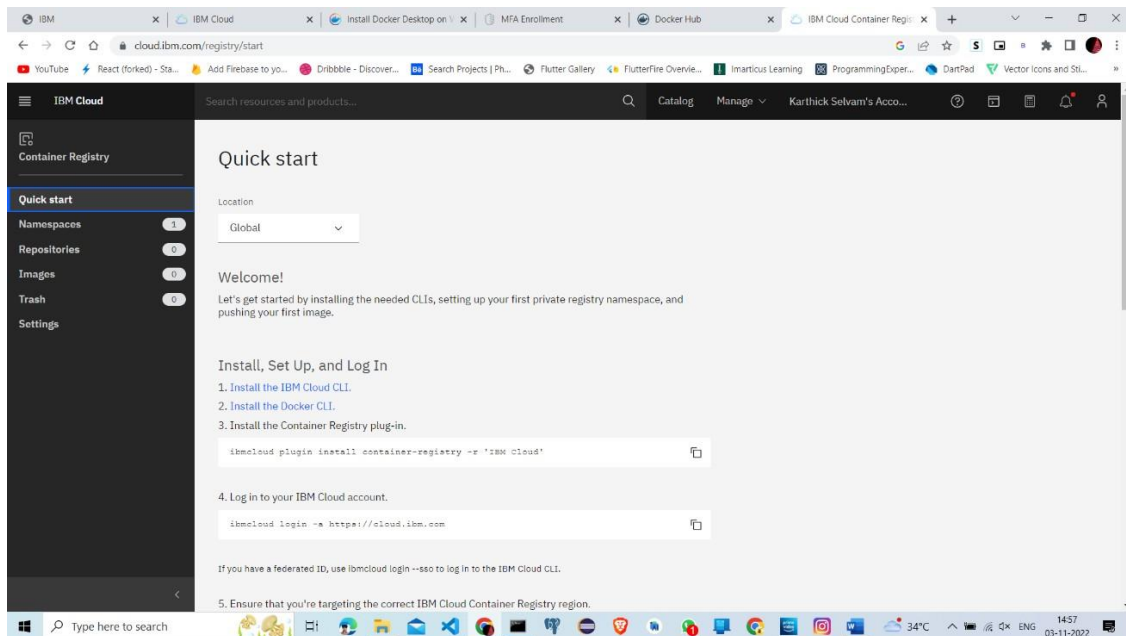


# SETTING UP APPLICATION ENVIRONMENT

## Step 2: Select container registry

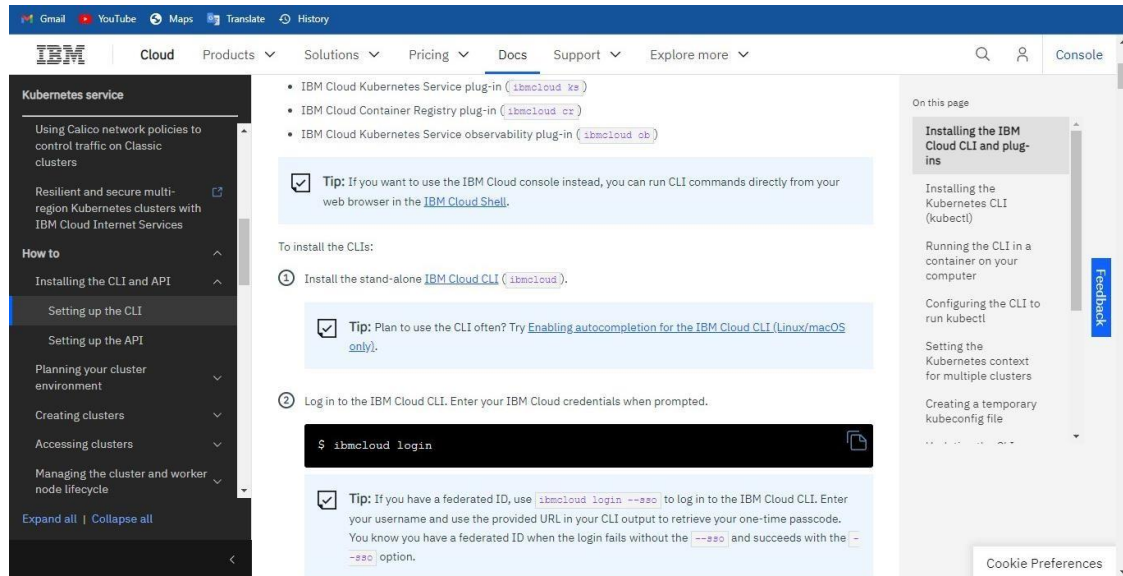


## Step 3: Select Quickstart to open container registry and click on install IBM Cloud CLI

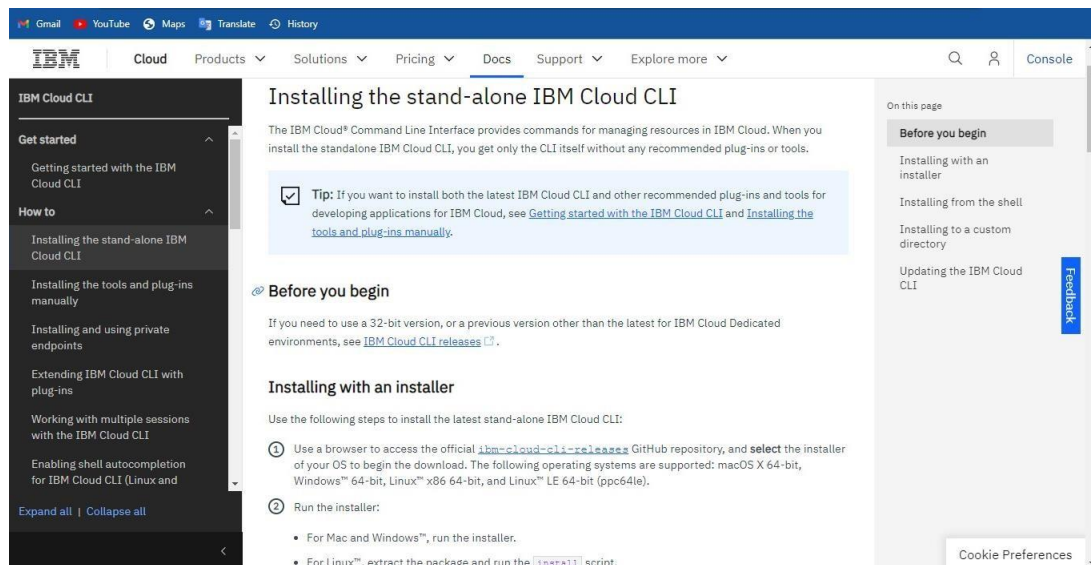


# SETTING UP APPLICATION ENVIRONMENT

## Step 4: Click on IBM Cloud CLI

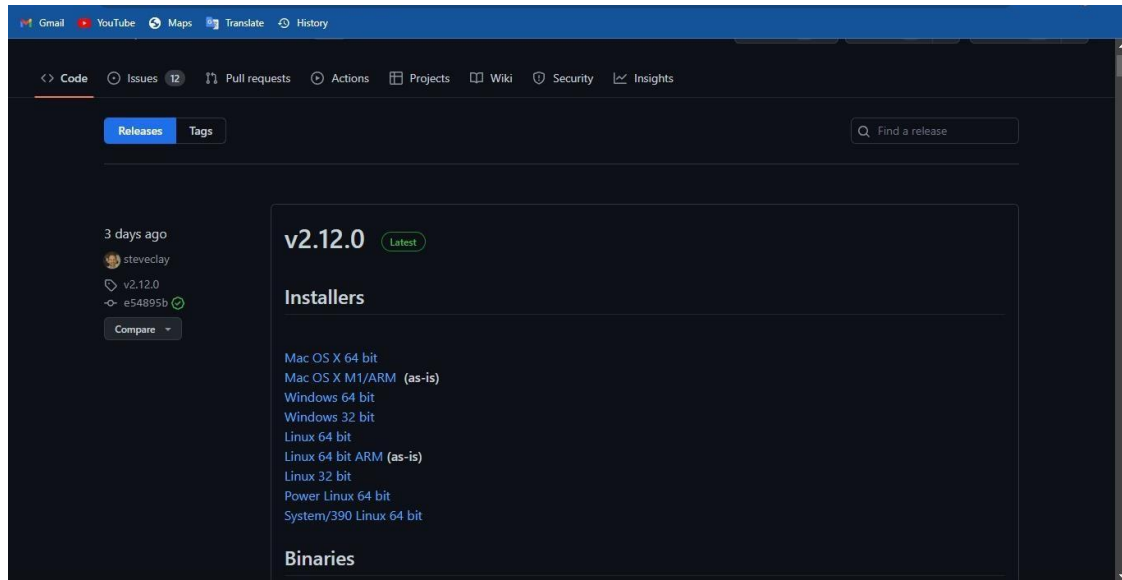


## Step 5: And then, Click on IBM Cloud CLI releases

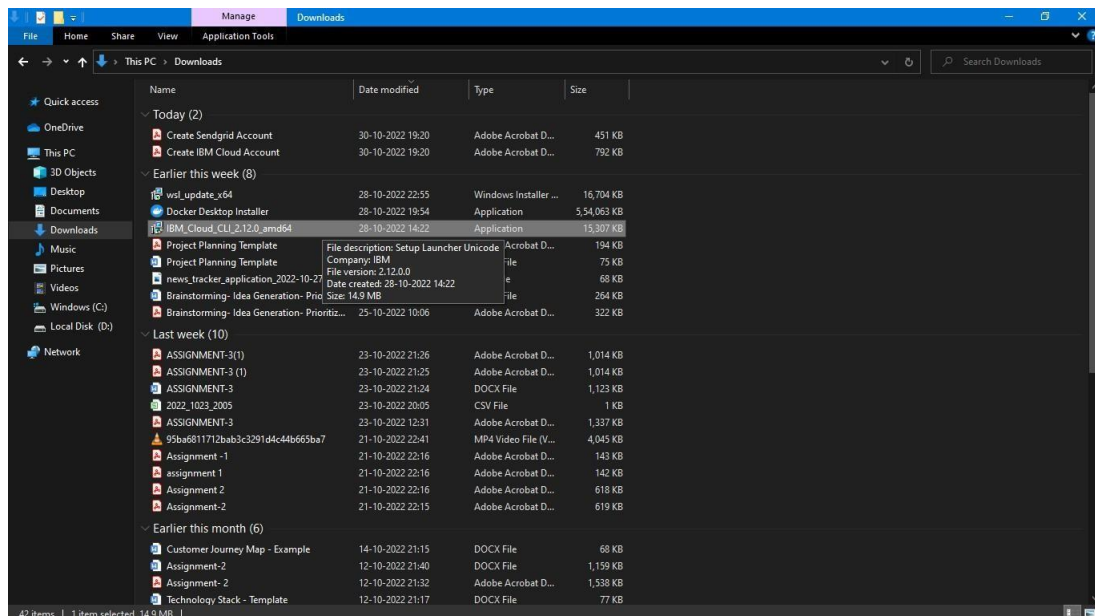


# SETTING UP APPLICATION ENVIRONMENT

Step 6: After that, the github page will open and download the IBM CLI installer by selecting as per your system required installer.

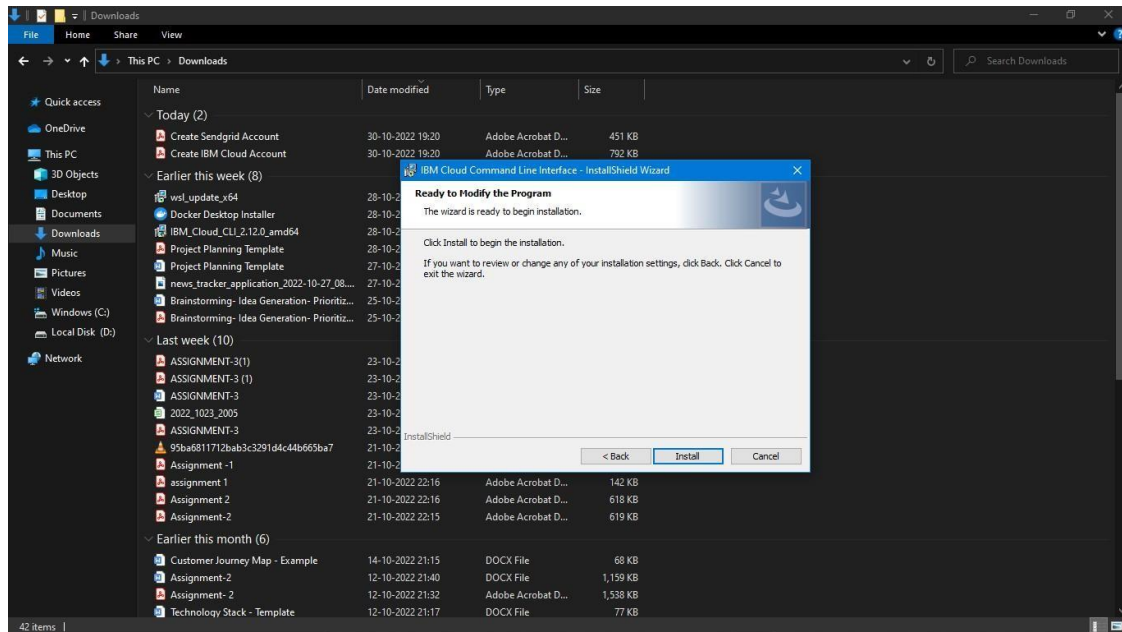


Step 7: After the download, Click the downloaded setup to run the installer



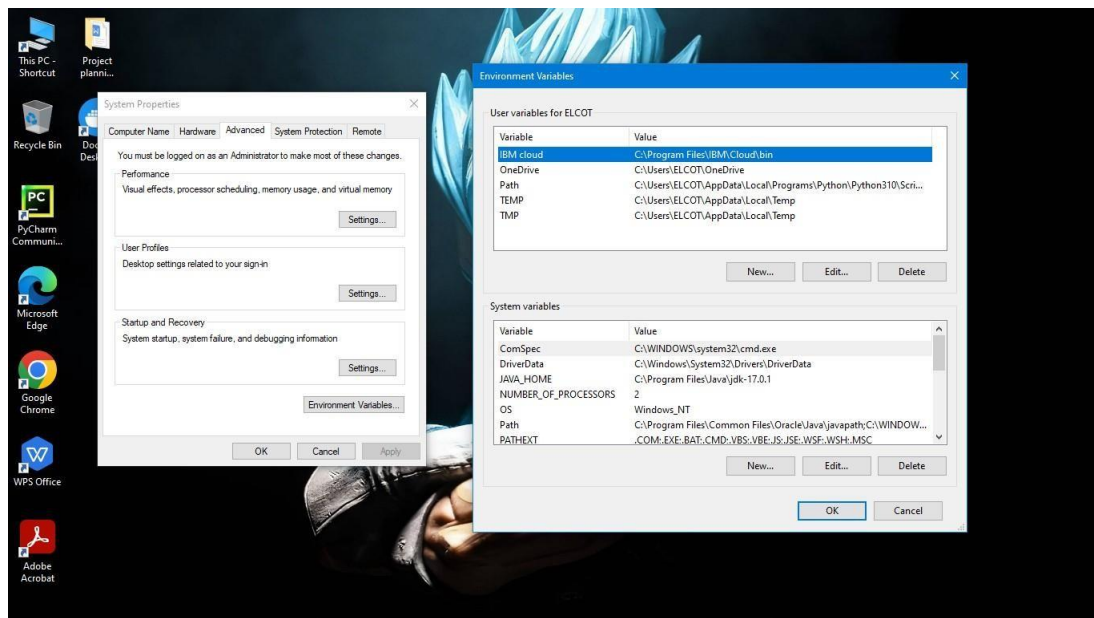


# SETTING UP APPLICATION ENVIRONMENT

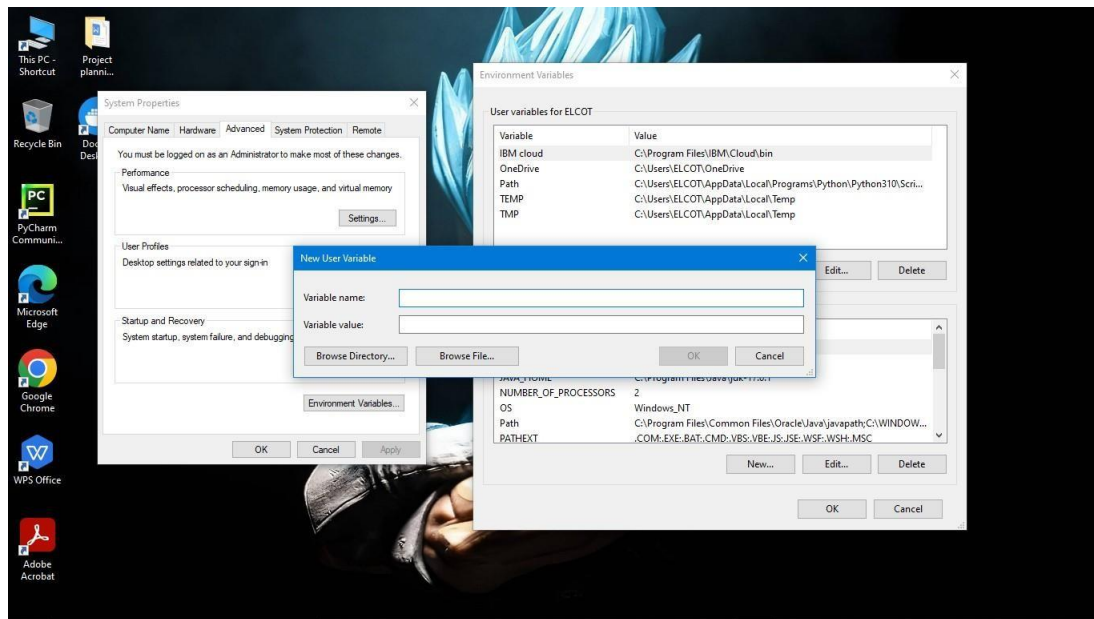


Step 8: After the installation set environment variable and then open CMD (Windows). Type this command to login in IBM cloud

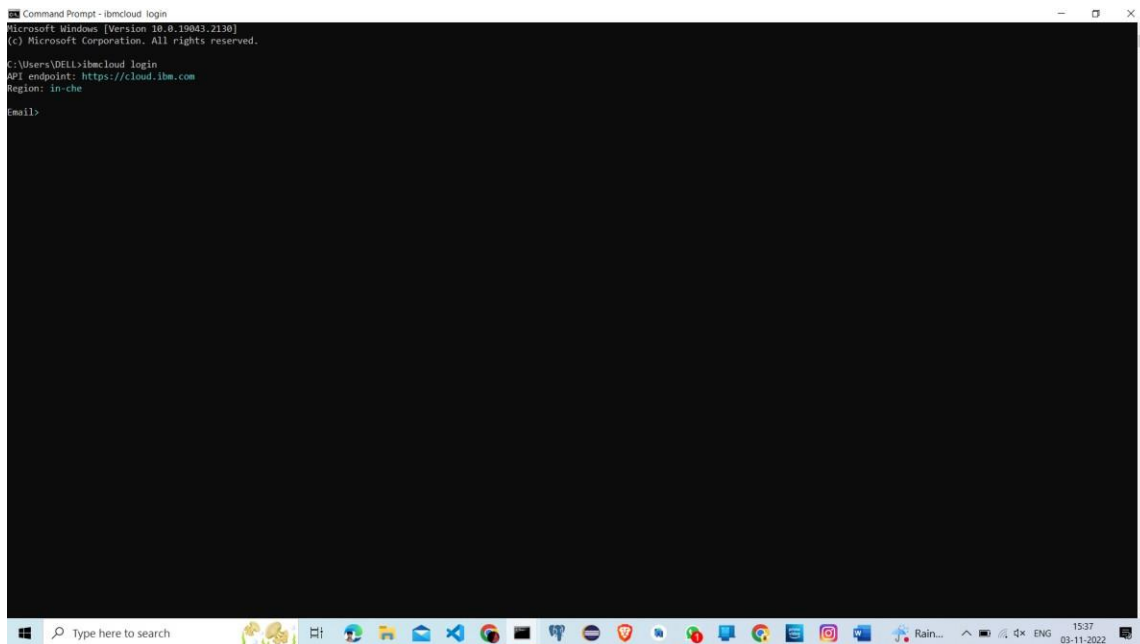
“ibmcloud login”



# SETTING UP APPLICATION ENVIRONMENT

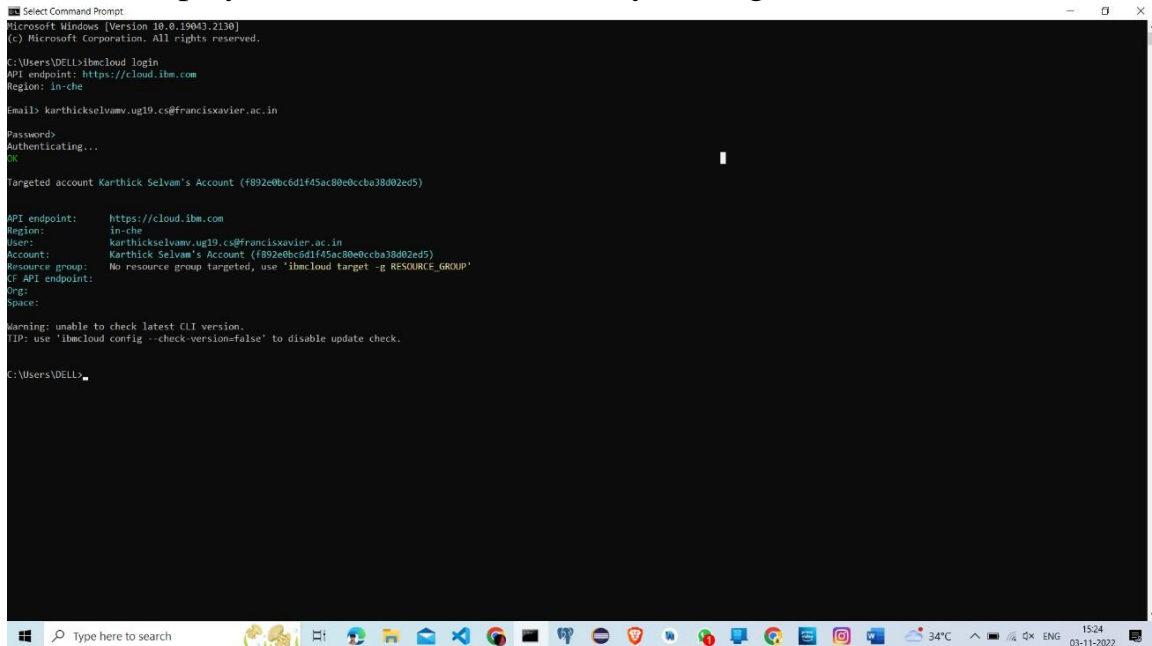


In the variable name, name it as “IBM Cloud” and in variable value the path location of the IBM.



# SETTING UP APPLICATION ENVIRONMENT

Step 9: Enter your IBM cloud email id and password, Then it will authenticate and signals “OK”. The number of regions will be displayed, select one of them for your targeted account.



```
Microsoft Windows [Version 10.0.19043.2130]
(c) Microsoft Corporation. All rights reserved.

C:\Users\DELL>ibmcloud login
API endpoint: https://cloud.ibm.com
Region: in-che
Email> karthickselvam.ug19.cs@francixavier.ac.in
Password>
Authenticating...
OK
Targeted account Karthick Selvam's Account (f892e0bc6d1f45ac80e0cbe3802ed5)

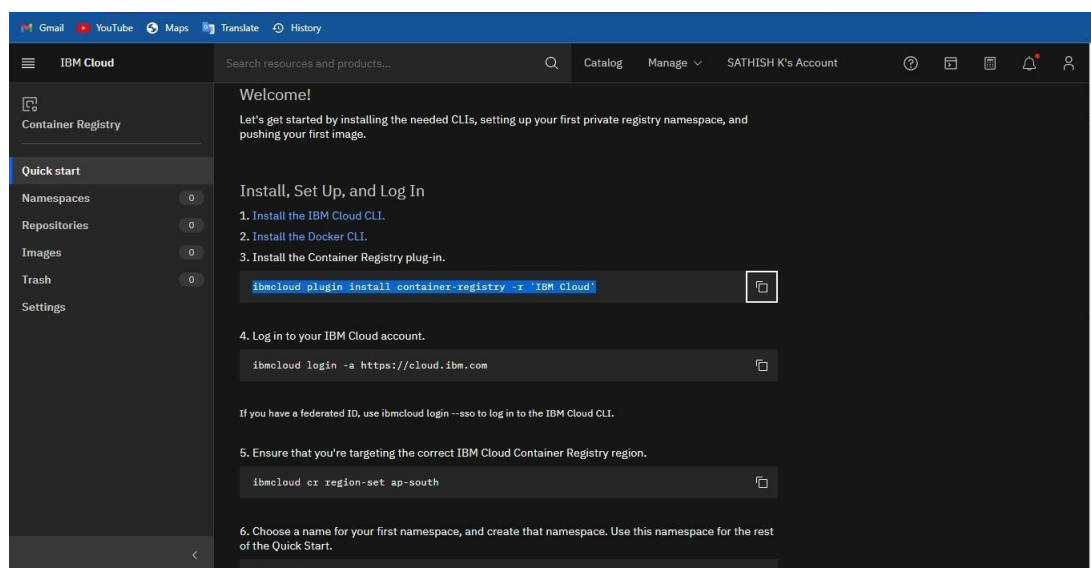
API endpoint: https://cloud.ibm.com
Region: in-che
User: karthickselvam.ug19.cs@francixavier.ac.in
Account: Karthick Selvam's Account (f892e0bc6d1f45ac80e0cbe3802ed5)
Resource group: No resource group targeted, use 'ibmcloud target -g RESOURCE_GROUP'
CF API endpoint:
Org:
Space:

Warning: unable to check latest CLI version.
TIP: use 'ibmcloud config --check-version=false' to disable update check.

C:\Users\DELL>
```

Step 10: Then copy the plugin command in your container registry (where the command displayed in your container registry which is opened on web browser) and paste and run it on cmd.

“ibmcloud plugin install container-registry -r”





# SETTING UP APPLICATION ENVIRONMENT

```
Command Prompt
Targeted account Karthick Selvam's Account (f892e0bcd1f45ac80e0ccha38d02ed5)

API endpoint: https://cloud.ibm.com
Region: in-che
User: karthickselvamv.ug19.cs@francisxavier.ac.in
Account: Karthick Selvam's Account (f892e0bcd1f45ac80e0ccha38d02ed5)
Resource group: No resource group targeted, use 'ibmcloud target -g RESOURCE_GROUP'
cf API endpoint:
Org:
Space:

Warning: unable to check latest CLI version.
TIP: use 'ibmcloud config --check-version=false' to disable update check.

C:\Users\DELL>ibmcloud plugin install container-registry -r
FAILED
Incorrect Usage.

NAME:
  install - Install CLI plug-in

USAGE:
  ibmcloud plugin install (PLUGIN_NAME | [-a, --all]) [-r REPO_NAME] [-v VERSION] [-f] [-q, --quiet]
  ibmcloud plugin install LOCAL-PATH/TO/PLUGIN | URL [-f] [-q, --quiet]

If no repository is specified, the command uses the official plug-in repository 'IBM Cloud'.
If installing a single plugin and no version is specified, the command selects the latest available version to install.
If the '-a, --all' flag is specified, the command installs all latest available plugins in the repository.

EXAMPLE:
  ibmcloud plugin install --all
  ibmcloud plugin install --all -r MyRepo
  ibmcloud plugin install http://example.com/downloads/my-plugin
  ibmcloud plugin install ~Downloads/my-plugin
  ibmcloud plugin install plugin-echo
  ibmcloud plugin install plugin-echo -v 1.0.0
  ibmcloud plugin install plugin-echo -r MyRepo -v ~1.2
  ibmcloud plugin install plugin-echo -v ">=0.3, <0.6" -f

OPTIONS:
  -a, --all      Install all latest available plugins in repository
  -r value       Repo name where the plug-in binary is located
  -v value       Version of the plug-in to be installed. Accepts specific semantic version or constraint. Only applicable when installing a single plugin.
  -f             Force installation of plugin(s) without confirmation
  -q, --quiet    Suppress verbose output

C:\Users\DELL>
```

Step 11: Set your region to global .  
“ibmcloud cr region-set global”

```
Command Prompt
Targeted account Karthick Selvam's Account (f892e0bcd1f45ac80e0ccha38d02ed5)

API endpoint: https://cloud.ibm.com
Region: in-che
User: karthickselvamv.ug19.cs@francisxavier.ac.in
Account: Karthick Selvam's Account (f892e0bcd1f45ac80e0ccha38d02ed5)
Resource group: No resource group targeted, use 'ibmcloud target -g RESOURCE_GROUP'
cf API endpoint:
Org:
Space:

Warning: unable to check latest CLI version.
TIP: use 'ibmcloud config --check-version=false' to disable update check.

C:\Users\DELL>ibmcloud plugin install container-registry -r
FAILED
Incorrect Usage.

NAME:
  install - Install CLI plug-in

USAGE:
  ibmcloud plugin install (PLUGIN_NAME | [-a, --all]) [-r REPO_NAME] [-v VERSION] [-f] [-q, --quiet]
  ibmcloud plugin install LOCAL-PATH/TO/PLUGIN | URL [-f] [-q, --quiet]

If no repository is specified, the command uses the official plug-in repository 'IBM Cloud'.
If installing a single plugin and no version is specified, the command selects the latest available version to install.
If the '-a, --all' flag is specified, the command installs all latest available plugins in the repository.

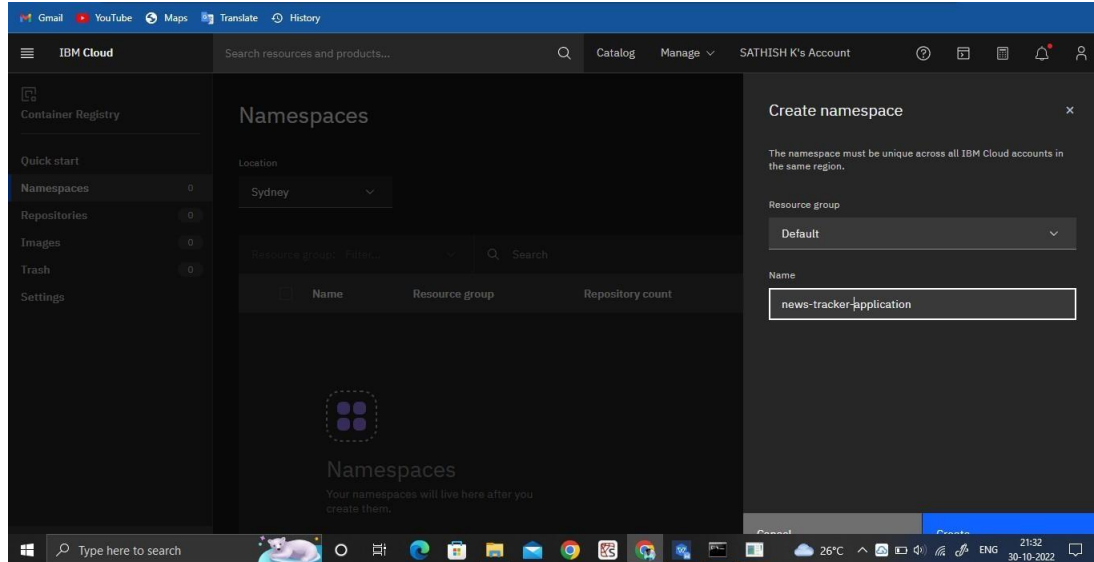
EXAMPLE:
  ibmcloud plugin install --all
  ibmcloud plugin install --all -r MyRepo
  ibmcloud plugin install http://example.com/downloads/my-plugin
  ibmcloud plugin install ~Downloads/my-plugin
  ibmcloud plugin install plugin-echo
  ibmcloud plugin install plugin-echo -v 1.0.0
  ibmcloud plugin install plugin-echo -r MyRepo -v ~1.2
  ibmcloud plugin install plugin-echo -v ">=0.3, <0.6" -f

OPTIONS:
  -a, --all      Install all latest available plugins in repository
  -r value       Repo name where the plug-in binary is located
  -v value       Version of the plug-in to be installed. Accepts specific semantic version or constraint. Only applicable when installing a single plugin.
  -f             Force installation of plugin(s) without confirmation
  -q, --quiet    Suppress verbose output

C:\Users\DELL>
```

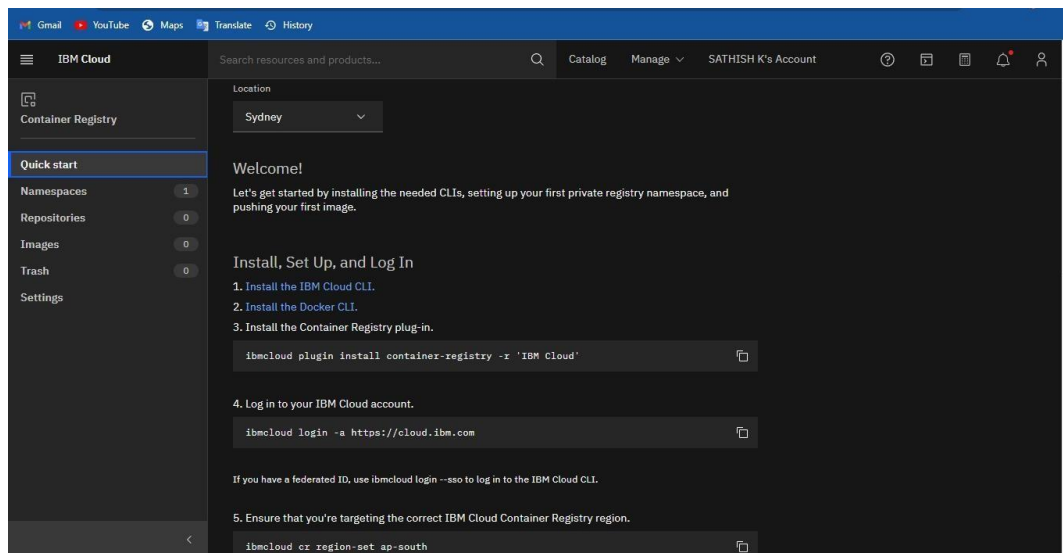
# SETTING UP APPLICATION ENVIRONMENT

## Step 12: Create namespace in your container registry



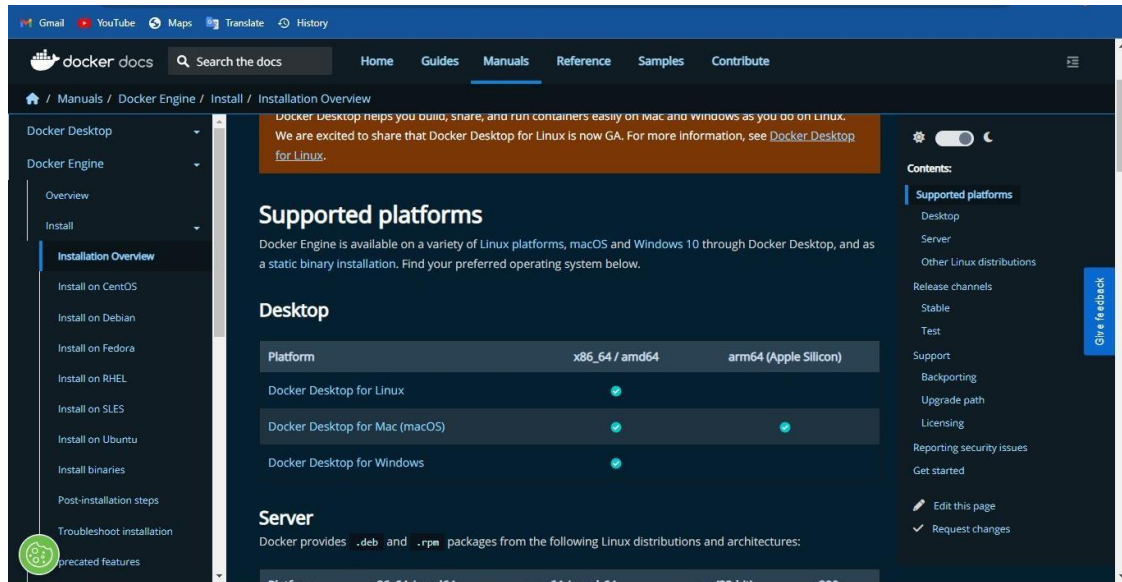
## 3. DOCKER CLI INSTALLATION:

Step1: Open container registry in ibm cloud and click on Install Docker CLI.

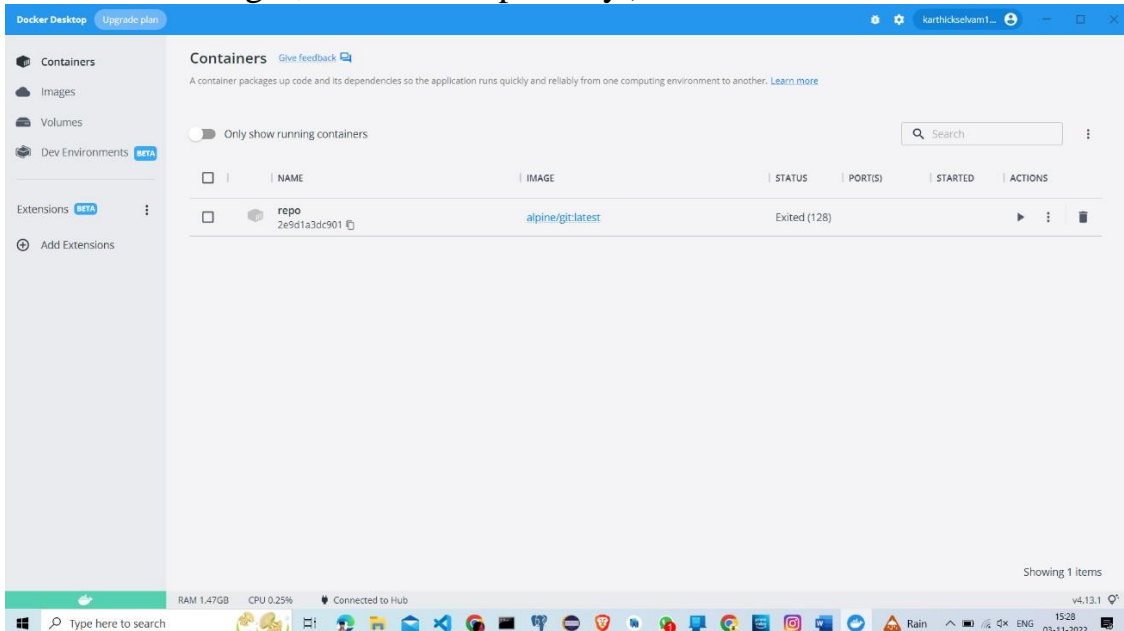


# SETTING UP APPLICATION ENVIRONMENT

Step 2: Then, Click on required installer for your specified system and download it.



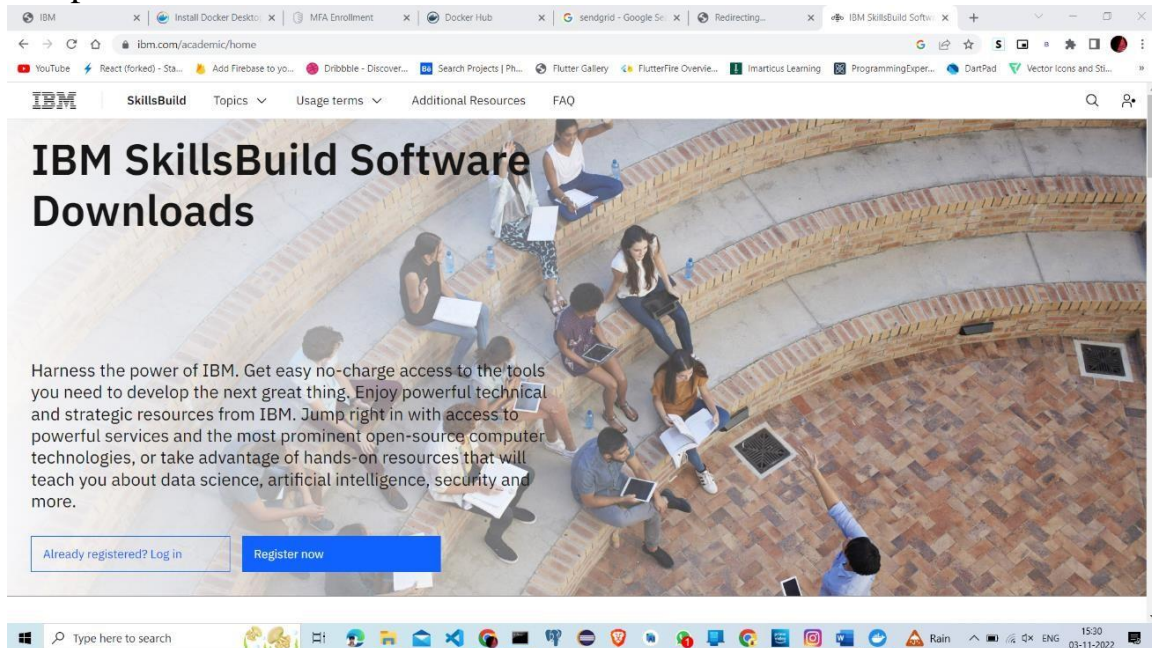
Step 3: After the setup download, run the setup and then open it and push the images, create the repository, etc....



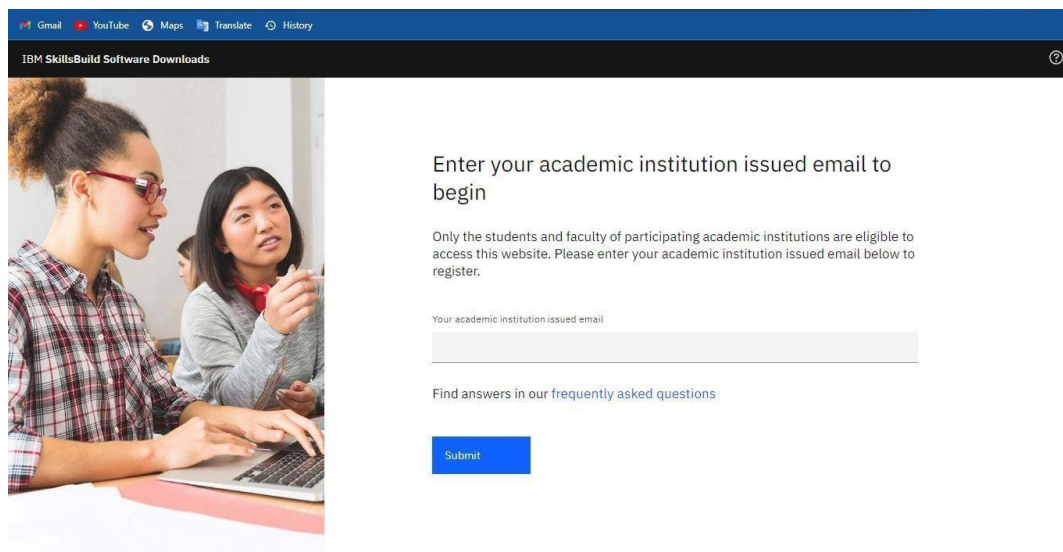
# SETTING UP APPLICATION ENVIRONMENT

## 4. IBM CLOUD ACCOUNT CREATION:

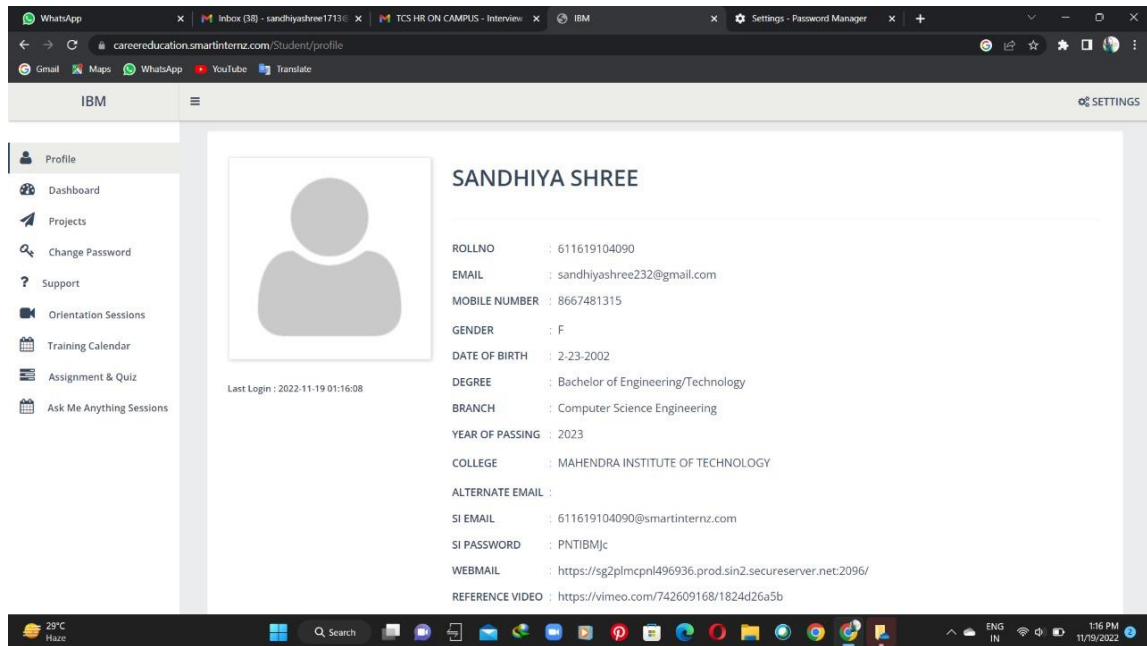
Step 1: Search for “ibm.com/academic” in the browser



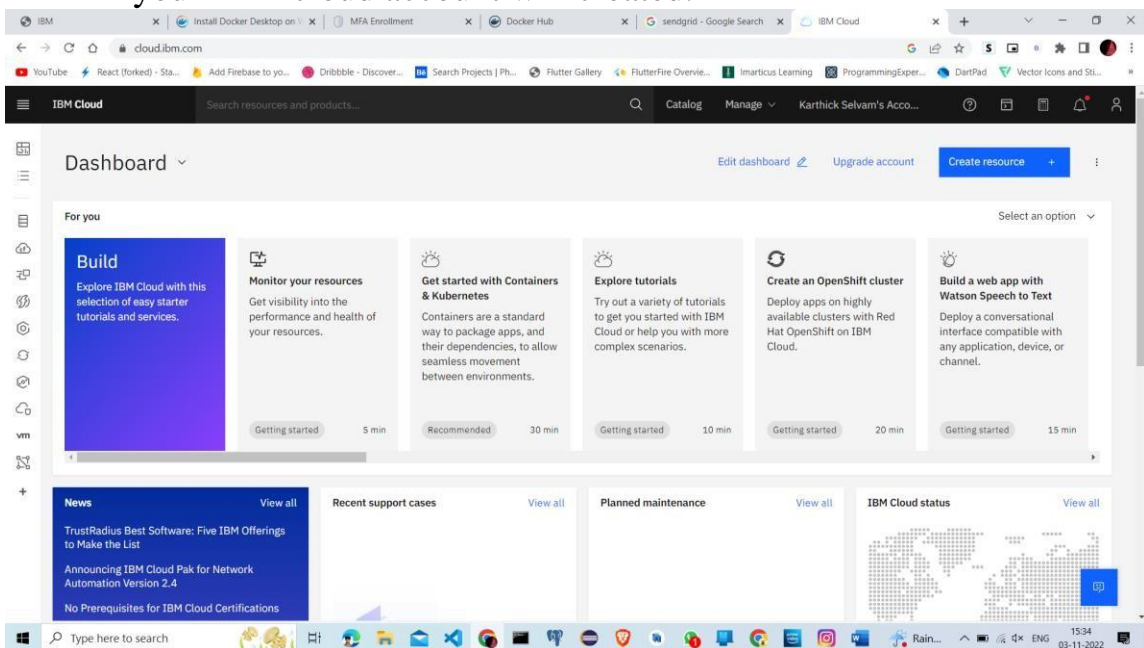
Step 2: Enter the mail issued by the academic institution and follow the procedure for entering the details which is provided as video link in your IBM profile.



# SETTING UP APPLICATION ENVIRONMENT



Step 3: After following the procedure that is given in reference video, your IBM cloud account will be created.

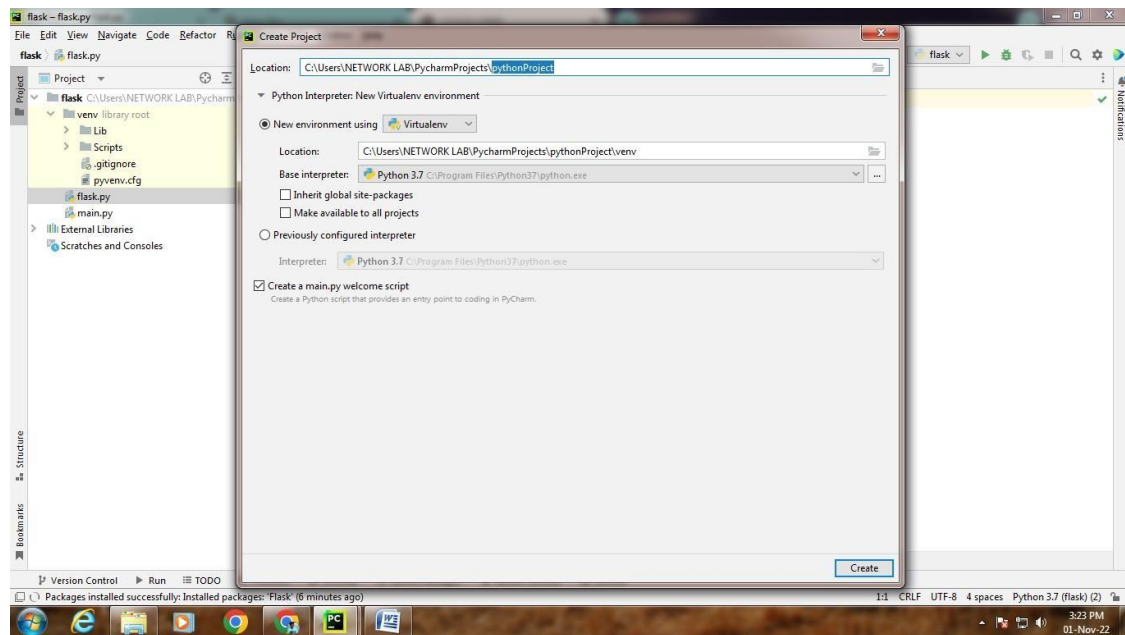




# SETTING UP APPLICATION ENVIRONMENT

## 5. CREATING A FLASK PROJECT:

Step 1: Open pycharm in your desktop and create new project folder



Step 2: Enter the following code to create the flask project

```
from flask import Flask

app = Flask(__name__)

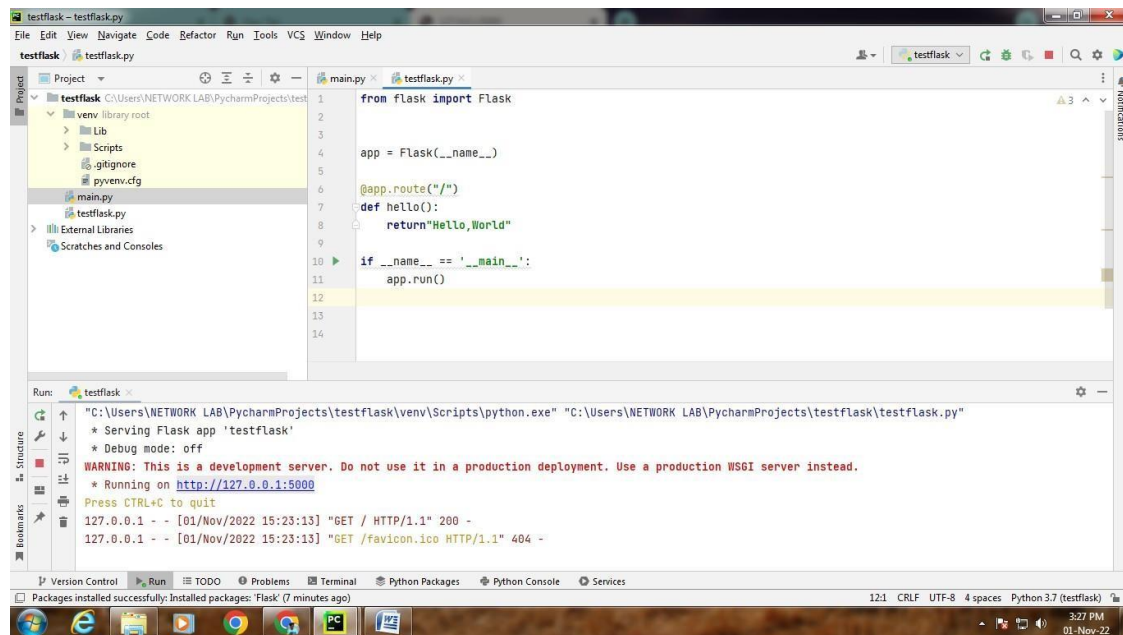
@app.route("/")
def hello():
    return "Hello, World"

if __name__ == '__main__':
    app.run()
```



# SETTING UP APPLICATION ENVIRONMENT

Step 3: Then run the code, it will show website link in terminal.



The screenshot shows the PyCharm IDE interface. The main editor window displays a Python file named `testflask.py` with the following code:

```
1 from flask import Flask
2
3
4 app = Flask(__name__)
5
6 @app.route("/")
7 def hello():
8     return "Hello, World"
9
10 if __name__ == '__main__':
11     app.run()
12
13
14
```

The Run console at the bottom shows the output of the command `python testflask.py`:

```
"C:\Users\NETWORK LAB\PycharmProjects\testflask\venv\Scripts\python.exe" "C:\Users\NETWORK LAB\PycharmProjects\testflask\testflask.py"
* Serving Flask app 'testflask'
* Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on http://127.0.0.1:5000
Press CTRL+C to quit
127.0.0.1 - - [01/Nov/2022 15:23:13] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [01/Nov/2022 15:23:13] "GET /favicon.ico HTTP/1.1" 404 -
```



Step 4: By clicking the link in terminal, it will show "Hello World" in the browser page

# SETTING UP APPLICATION ENVIRONMENT