CICD setup for students

Virtual Machine

- VMware
- Oracle virtualBox

Docker (container)

- also a VM but it is a lightweight machine

DEV (windows) --> TEST --> UAT --> PROD (linux)

DEV (windows) --> TEST --> UAT --> PROD (windows)

software deployment

- `mysql`
- `redis`
- python
- python package (`requirements.txt`)
- `python manage.py runserver`

Containerization

Containerization is the packaging of software code with the operating system (OS)

Step to generate access token on `https://hub.docker.com/`

- STEP 1: create account on `https://hub.docker.com/`
- STEP 2: click on profile icon in docker hub -> account settings -> security -> New access token

- STEP 3 : pick name as - `dockerhub`, pick scope as - `Read, Write, Delete` and click on `generate token`
- STEP 4: click on `fork` button `https://github.com/prashant5nov/project1`
- STEP 5: Repository will reflect in your `github` account `https://github.com/<username>`
- STEP 6: Go to project repository `https://github.com/<username>/project1` -> `settings` -> `secrets and variables` -> `actions` -> `New repository Secret`

```
`DOCKERHUB_USER` - `<docker hub username>`

`DOCKERHUB_TOKEN` - <token generated in docker hub>
```

- STEP 7: Open git bash on your machine and `git clone <project https URL>`
- STEP 8: Open the code repository in `Pycharm`
- STEP 9: Go to `github project` (project1) and `actions` tab and click on `I understand my worksflows, go ahead and enable workflows`
- STEP 10: Make some change. For example, go to `requirements.dev.txt` and add `black==23.1.0`
- STEP 11: `git add requirements.dev.txt` and `git commit -m "first"` and `git push origin main`