

Droplet - Develop, Stage and Deploy

Professor Manual

Getting Started

Droplet is a repository and environment to keep a track of projects at your university. Droplet ensures that your students get exposed to the right set of tools to provide an all-round development as a software engineer. Droplet also makes it easier for you to keep track of submissions and automates testing for some types of applications.

Profile

This is where you will receive a list of assignments that you have assigned throughout your time at the university.

There will also be a button for you to create more assignments.

They will be arranged in order of submission date to make it easier for you to keep track of deadlines.

To view more about an assignment, click on the title of the assignment. The link will take you to the next step.

Assignment Details

Now you can view the details of the assignment given to you. You will also be able to download and view all the test cases that will be run on your application in the form of a zip file.

This page also contains a list of students IDs that have submitted the assignment. Clicking on an id lets you see the submission details of that student's submission.

Next, we will look at creating assignments.

Creating Assignments

Initial

Provide details such as:

1. Title: Title of the project
2. Description: In detail description of the assignment's requirements.
3. Semester
4. Section
5. Course Name
6. Database: Whether or not the application should use a database
7. UI Type: one of three UIs that Droplet supports to handle applications.
8. Submission Date

UI Details

1. CUI: Here you can provide an executable name that the student will use. You can also upload the test cases that will be executed by the student and by Droplet.
2. Web UI: Here you will provide scenarios in plain English. Each scenario will then be used by a student to record a test case and store all of them as a selenium.side file.
3. REST: Here you may provide the API, method and status code for each test case. You may also upload the input and output files. Note that input files are not to be uploaded for GET and DELETE requests.

Submission Details

Based on the assignment created above, once you click on a student submission, you will view the:

1. Source code
2. Docker image
3. Report

Hint: Having a report link gives the flexibility of either having a document or a folder. You may ask students to upload the Dockerfile, Report and other media in this folder for a complete assessment.



You will also be able to:

1. Download a selenium.side file for Web-based projects
2. Download a postman.json file as a zip file for REST-based projects

Deployments

CUI

The Spin Docker field allows you to spin up a docker on the remote server running droplet and it will show you how many cases passed or failed.

WebUI

The Spin Docker field allows you to spin up a docker on the remote server running droplet and it will show you the endpoint where the container has been hosted. You may use this endpoint to run the 'side' script using **selenium-side-runner**. Click stop to kill the container.

REST

The Spin Docker field allows you to spin up a docker on the remote server running droplet and it will show you which API tests passed or failed.

Going Further

Droplet is a tiny insight into the wide range of development, testing and deployment tools available today. Droplet hopes to have taught your students some best practices that will enable them to build robust, safe and easily deployable applications.

