Parameterized and Up/Downstream Project

Agenda

- What build parameters are and their importance
- Modify parameters of our freestyle projects
- Create upstream and downstream projects

- Refer:
  - https://github.com/atingupta2005/Jenkins-5-Days-Training-Material/tree/master/Hands-On/Participants/7.%20Jenkins%20in%20Action/7.%20Parameterized%20and%20Up_Downstream%20Project

Build Parameters

- Build parameters help us set environment variables for our projects
- We can make use of build parameters to customize our build to make it run differently

Parameterized Projects

- On the Jenkins dashboard, select New Item on the top left of the dashboard
- On the next page, select Freestyle project as the project type
- Enable this option
  - This project is parameterized
- Add few parameters
- Access parameters in Build\Execute Shell
  - echo $<param name>
- Build with Parameters option on the left-hand menu, which is the fifth item.

Activity: Setting up Parameterized Projects

- You have been asked to set up a freestyle project that will contain two string parameters, your first and last names, and a build step executing a bash script that will display the greeting **Hello** followed by your full name.

Steps for Completion

- On the Jenkins dashboard, go to the configuration panel and select New Item.
- On the New Item view, enter a project name, select Freestyle project, then select OK.
- Under the general section of the project configuration, enter an appropriate project description.
- Enable the checkbox
  - This project is parameterized
- Add the first parameter by clicking on the Add Parameter drop-down menu and selecting String Parameter
- Fill in the form with the details of the first parameter, that is, your first name, as displayed
- Follow the same procedure to create the second parameter for your last name

Steps for Completion

- In the build section of the project configuration, select the Add build step drop-down menu and select Execute shell
- This presents us with a form requiring us to insert the command we want to execute. Populate the text area
  - echo "Hello ${FIRST_NAME} ${LAST_NAME}"
- Press Apply and Save at the bottom of the screen to save your project configuration. This will direct you to the project dashboard.
- On the left-hand project options menu, select Build with parameters to build the project
- Fill in the parameters if you are not comfortable with running the project with the default parameters. Select Build.
- On the build history on the left, hover over the build number and select Console Output

Build Triggers

Build Triggers

- To trigger the build based on event automatically

Creating Upstream/Downstream Projects

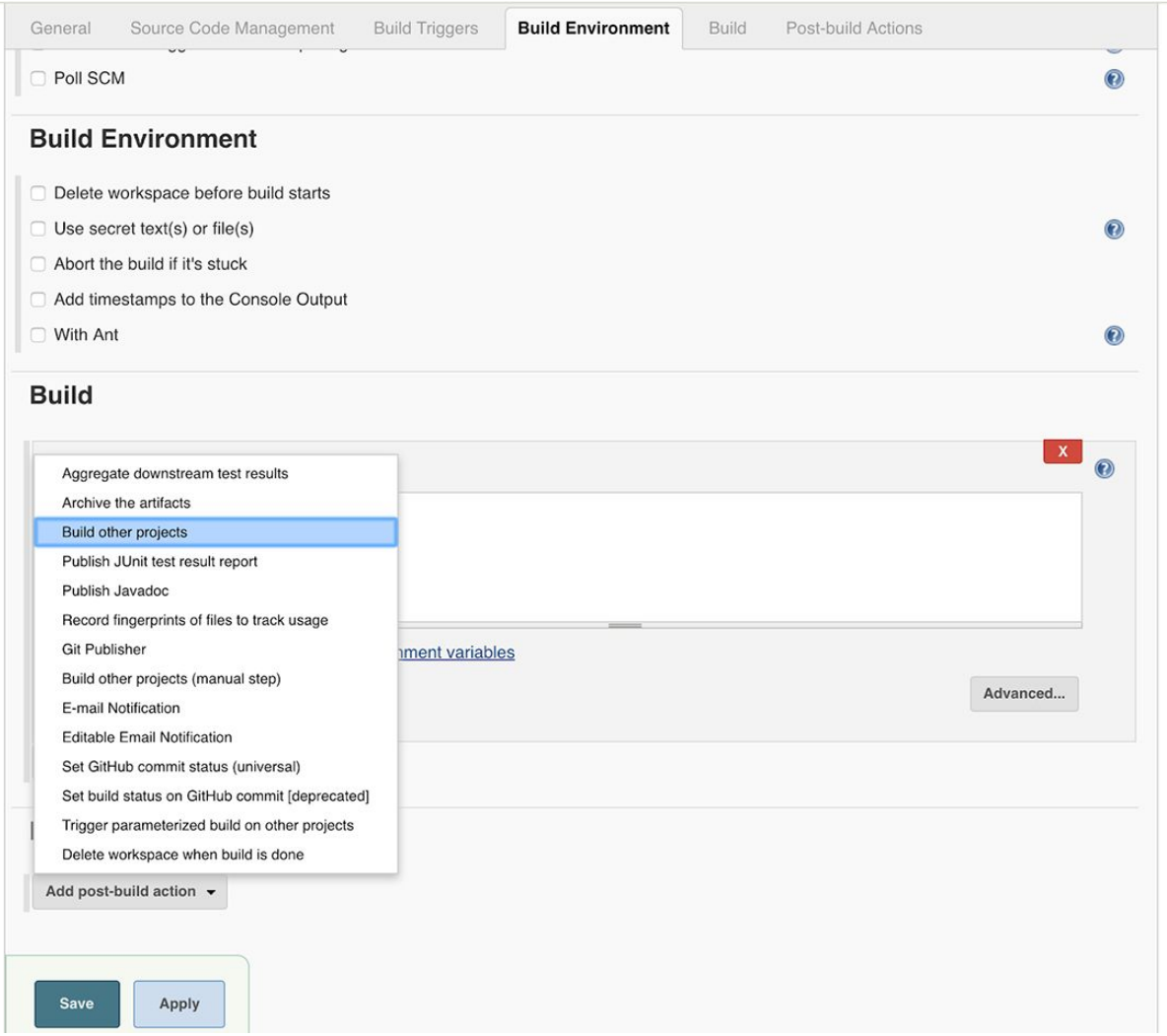
- We will be creating two projects and using one to trigger the other
- Given two projects, project A and project B
  - If project B is configured to run once project A completes, we call project B the downstream project and project A the upstream project
- Let's create Project A and Project B

Build Triggers

- Configuration of Project B

Build Triggers

- Configuration of Project A



Running an Upstream Project

- Now that we've understood how to configure upstream and downstream projects
- Build Project A
- Select Project B under the Downstream Projects section
- Check Console Output

Activity: Building a GitHub Project

- You have been provided with a simple code project on GitHub with test files and have been tasked with creating a Jenkins project that will run the tests in the project.

Steps for Completion

- Go to Jenkins dashboard, on configuration panel on the left, select New Item.
- Enter an appropriate name for project, select Freestyle project, and select OK
- Under Source Code Management in the project configuration, select the Git radio button.
- Under Repository URL, enter the URL of the repository where you have the sample code files
  - https://github.com/atingupta2005/Jenkins-5-Days-Training-Material/
- Finally, add a build step to the project that will execute the shell command to run our tests.
  - cd "Jenkins-5-Days-Training-Material/Hands-On/Participants/7. Jenkins in Action/7. Parameterized and Up_Downstream Project/"
  - python test_sum.py

Steps for Completion

- Click Apply and Save to save our project configuration.
- Open the project dashboard, and select Build Now.
- View Console Output


thanks