**Creating A Freestyle Project**

**Objective:** In this lab, you will create a **Freestyle UI-driven Jenkins Project**. Then, you will build the project and see the results.

**Jenkins Freestyle Project** is a repeatable

- build job
- script
- or pipeline

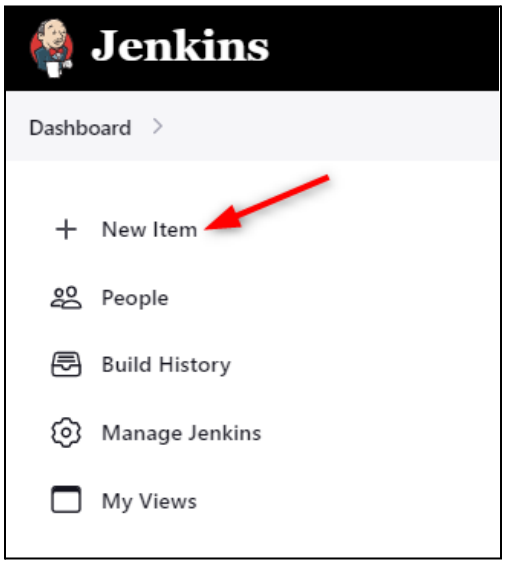
that contains **steps** and **post-build** actions.

It allows users to configure build triggers (**automatically starts/schedules a build whenever the developer makes changes to SCM**). Users can configure Jenkins plugins to build steps and post-build actions.

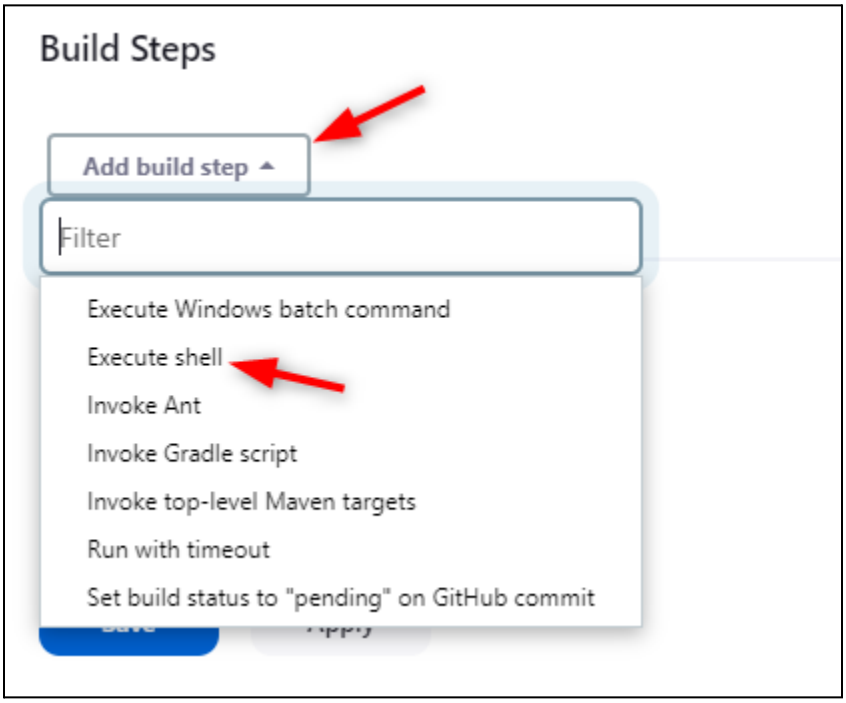
**Create a new project**

1. If you aren't already on the main Jenkins dashboard, click the "**Jenkins**" title on the top left


2. Click on “New Item”



3. Enter "cow-world" in the "Enter an item name" box
4. Click "Freestyle project"
5. Click OK
6. Under Project configuration enter a description of your liking
7. Scroll to the bottom. Under 'Build Steps', click 'Add build step'
8. Choose 'Execute shell'



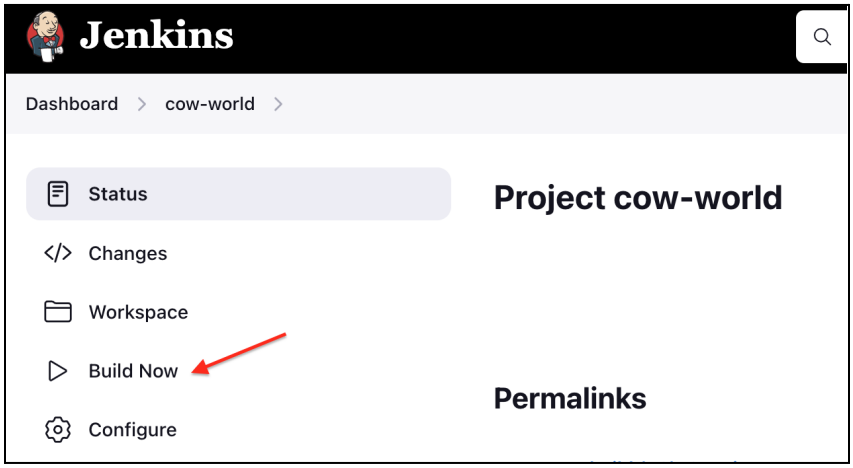

9. In the Execute shell **Command** window, enter the code:

   **echo "This project is called $JOB_NAME"**
   **/usr/games/cowsay "Hello World"**

10. Click **Save**

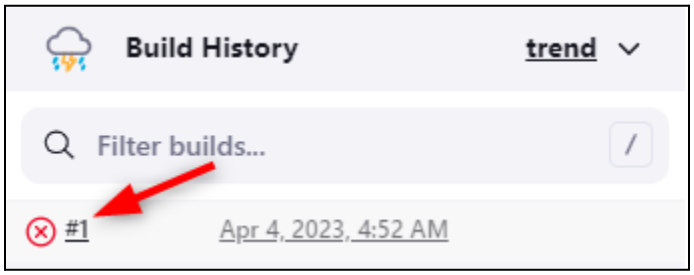
11. Click ‘Build Now’

NOTE: This build will fail. This is expected behavior because the package 'cowsay' is not installed on our Jenkins master.




**Note this fails.**

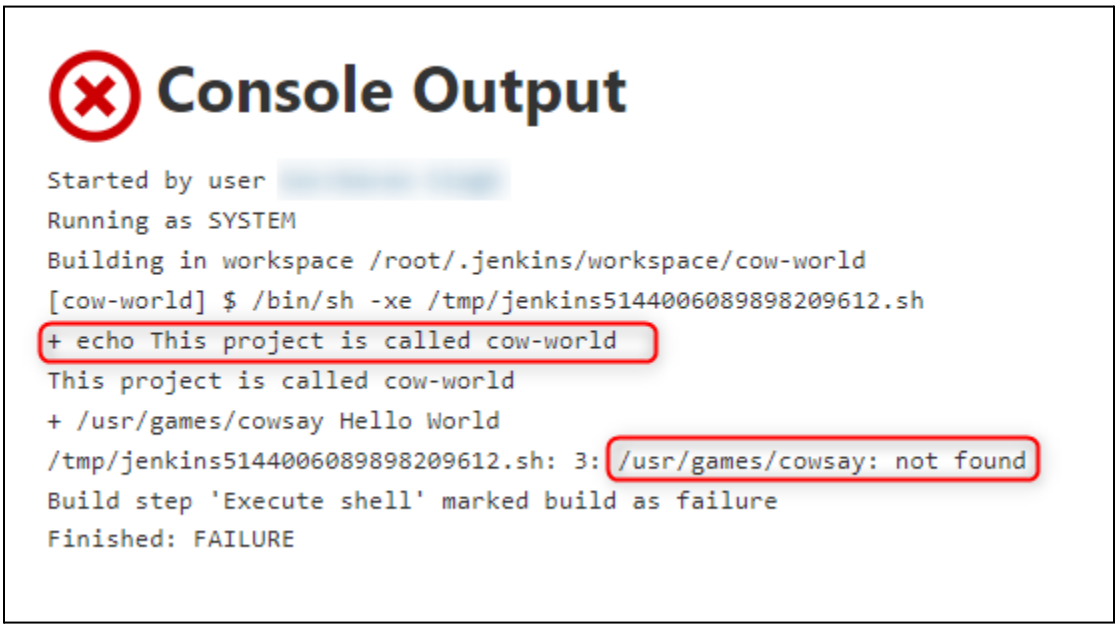
12. Under the '**Build History**' on the left, look for the red ball next to the **#1**, indicating that **Build #1 was not successful**.




13. Click the red cross under '**Build history**', to view and read the errors.

14. First, see that your echo command worked. It wrote to the console output "This project is called cow-world", because it interpolated your $JOB_NAME environment variable.

15. Next, look for the error that reads: "cowsay: not found"



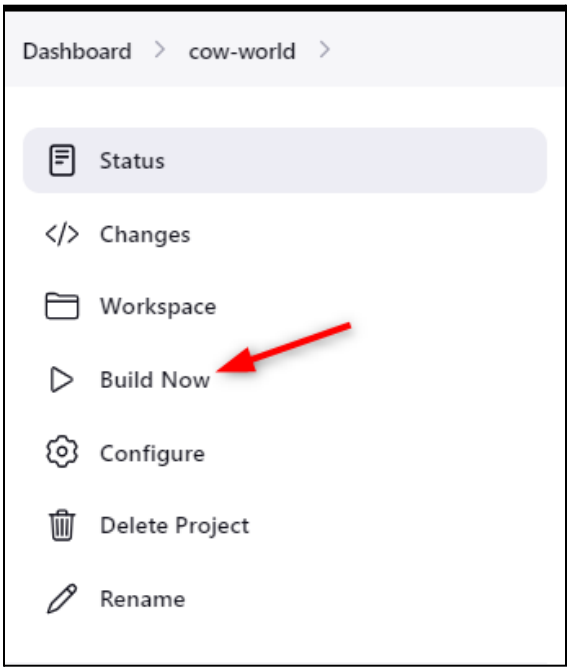

It seems cowsay is not installed on this machine, so Jenkins can not use it.

16. To resolve this, we will install cowsay on Jenkins, so from the Jenkins Master VM in a terminal window, run this command:

    **$ sudo apt-get install -y cowsay**

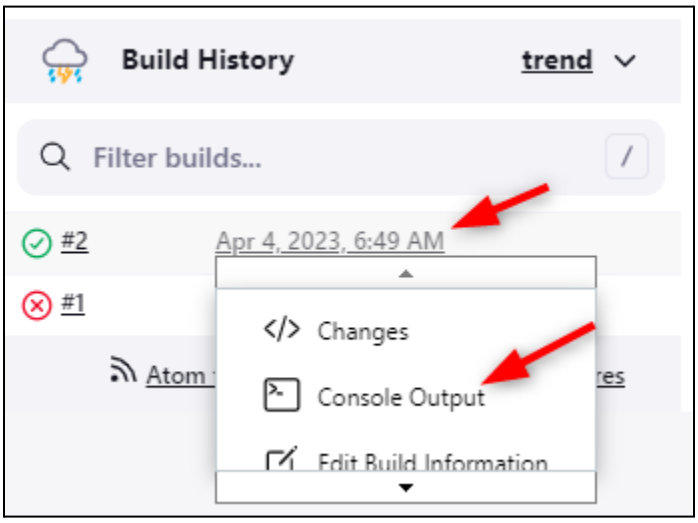
17. Re-run the build

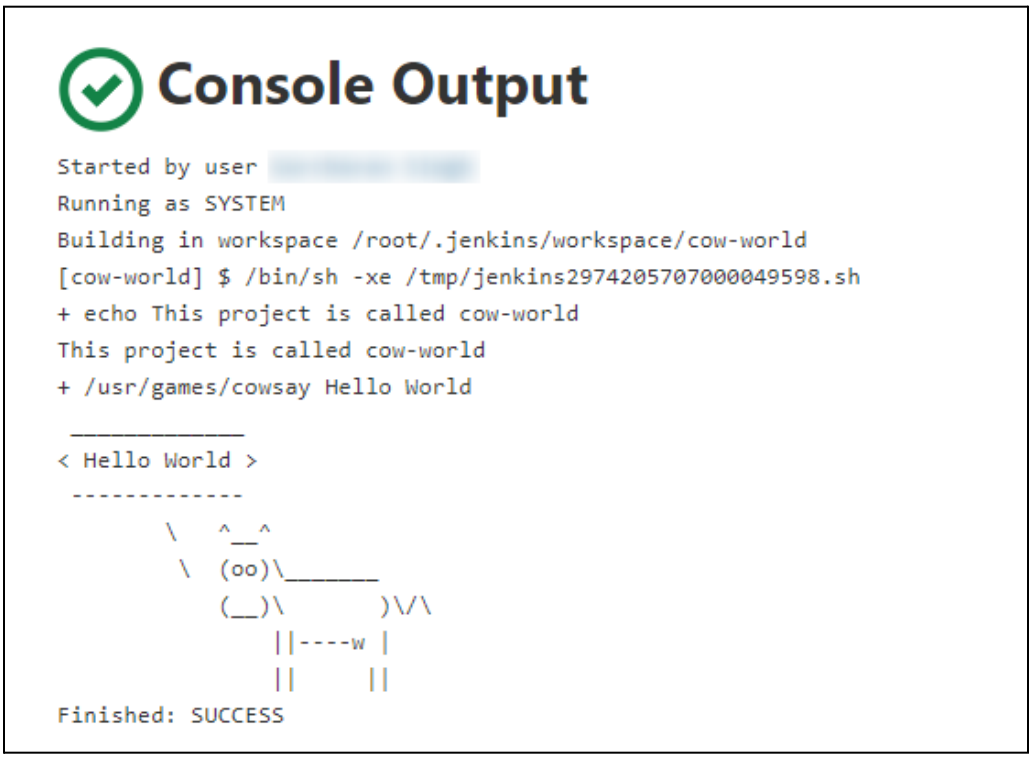
18. Back in the Jenkins interface, click on your **“Project**” and re-run the build with '**Build Now**'




19. Under the '**Build History**' on the left, look for the green tick next to the #2, indicating that Build #2 was successful. If you have a red cross next to #2, duck for cover and watch out for rogue cows!! In the case of a failed build, click 'Configure', fix the errors and try again.

20. Click the **dropdown** next to the #2 and click '**Console output**'. This is another way to get to the console output (you could also just click the Green Tick).

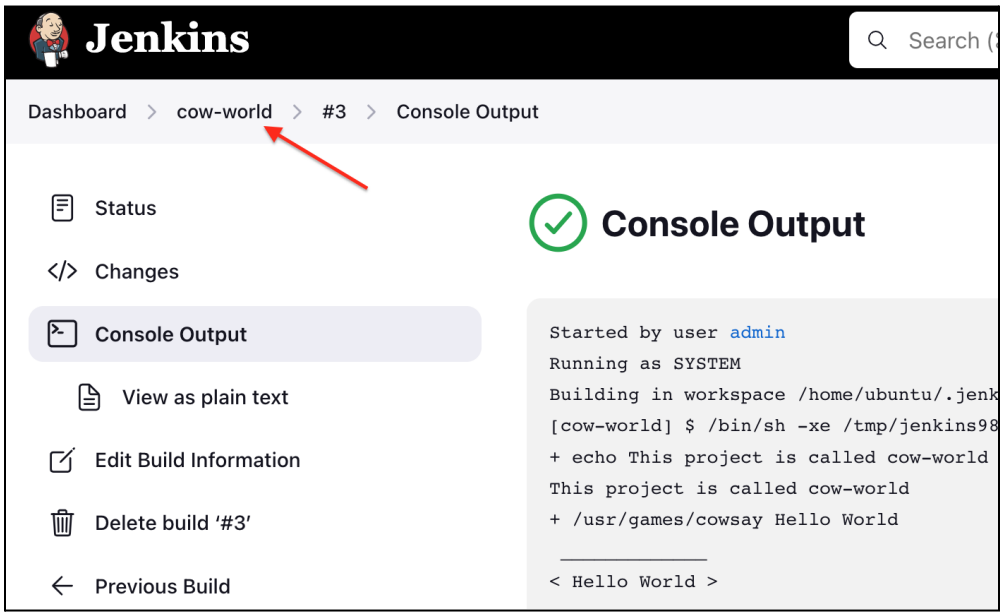




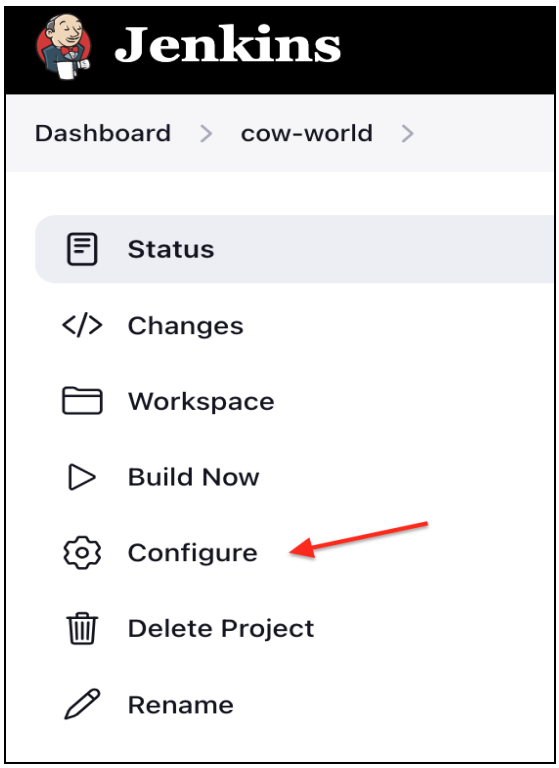

You should have a cow

### Add Parameterization

21. Click on your project '**cow-world**'.

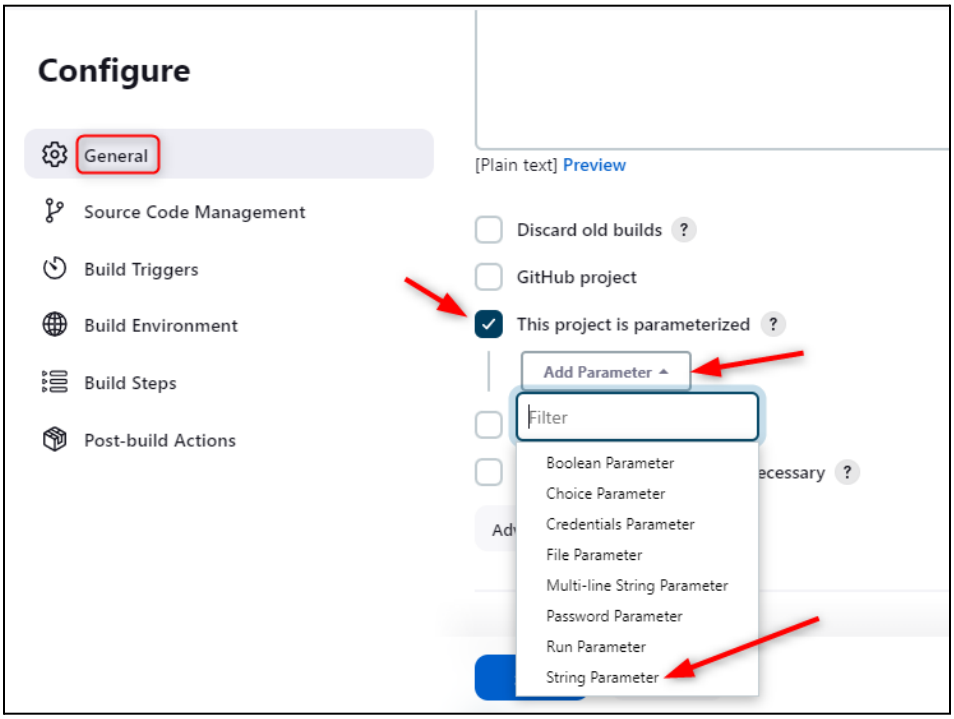


22. Click '**Configure**' on the left nav bar




23. Under the General section, check the box labeled '**This project is parameterized**'

    a. Click 'Add parameter'




b. Choose 'String Parameter'

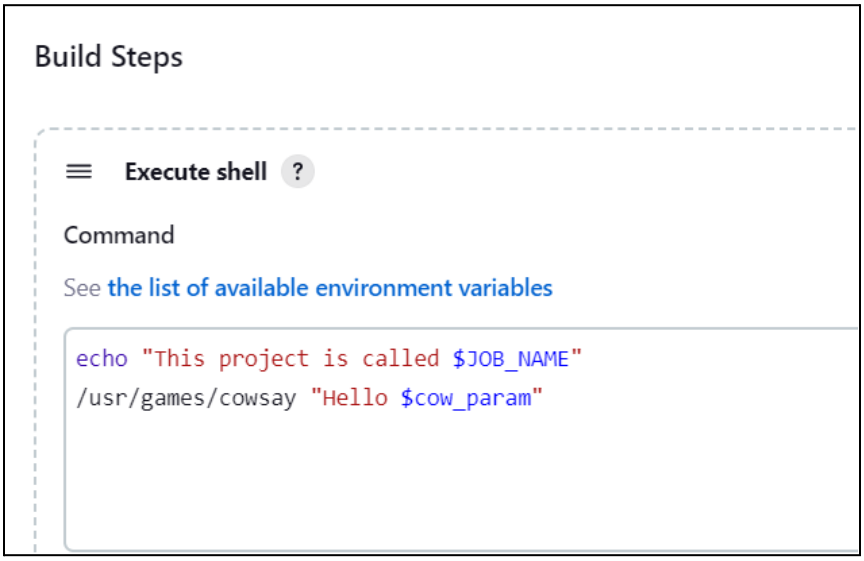
   i. Name: cow_param

   ii. Default Value: $JOB_NAME

   iii. Description: What the cow says

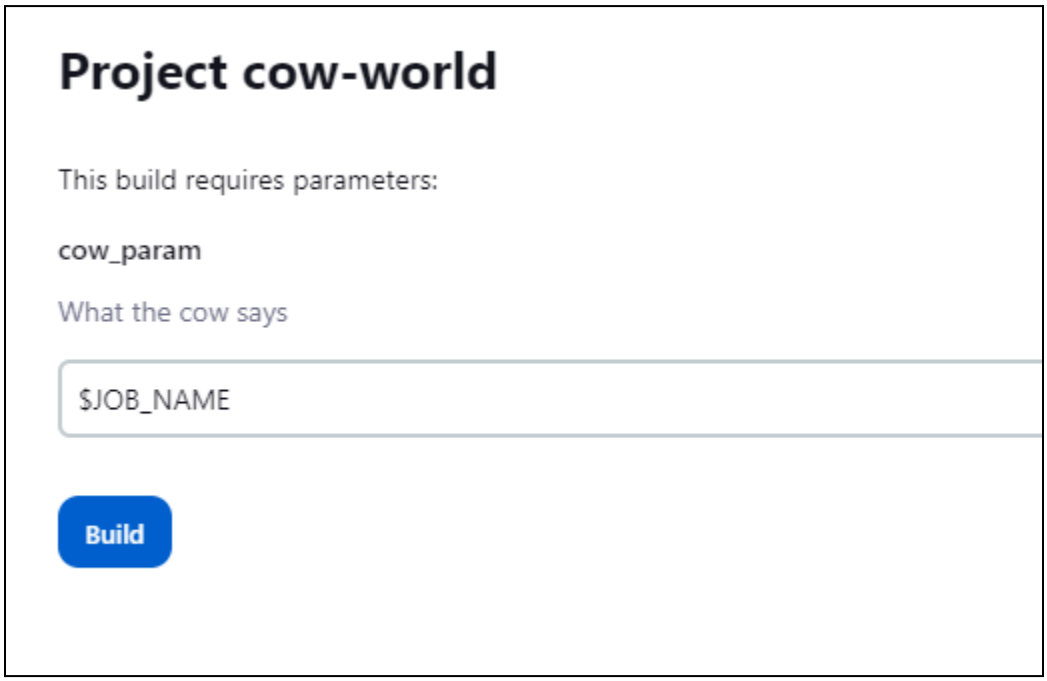
24. Scroll down to the Execute shell field and utilize the new parameter. Change your code to:

    **/usr/games/cowsay "Hello $cow_param"**




25. Save the project configuration and then click **Build with Parameters.**

26. Leave the default value for cow_param of $JOB_NAME and click 'Build'.




27. Look at the console output for your most recent build. Notice what the cow says now. She is saying "Hello" followed by the name of your project "cow-world". This is because $JOB_NAME resolved to the name of the project, which is "cow-world"

**Change the parameter value**

28. Click "Back to Project" and run the build again:

    a. Click 'Build with Parameters'

    b. Change the parameter $JOB_NAME in the Build window to any value you want

    c. Click 'Build'

    d. See what the cow says in the console output for your latest build

**Write to a file to the workspace**

29. Go back to the configuration of your project

30. Change the Execute Shell command to match the following two lines:

    **echo "This project is called $JOB_NAME"**
    **/usr/games/cowsay "Hello $cow_param" | tee cowput.txt**

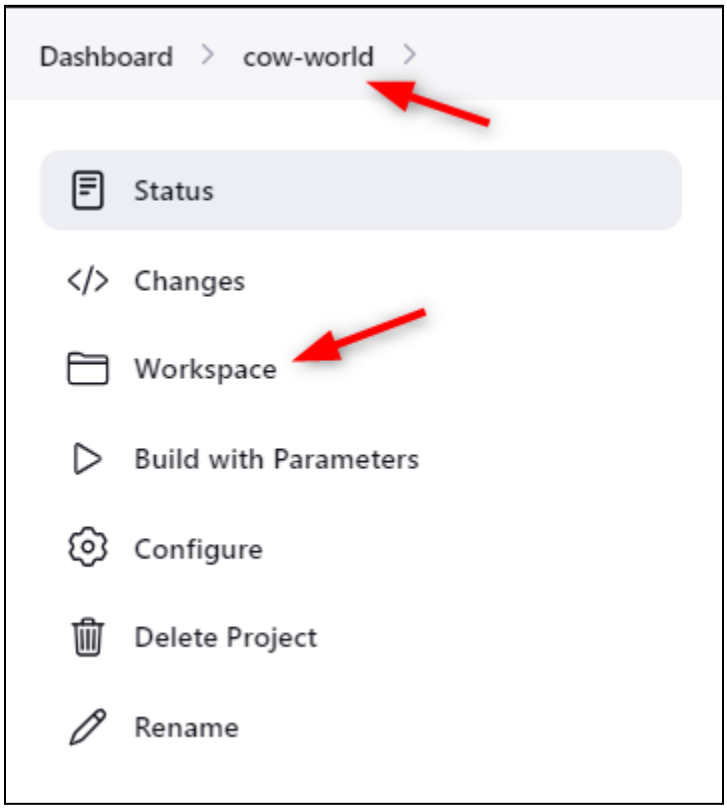

31. This command will send the output to the console, and also create a file in the workspace, named cowput.txt, with the cow output
32. Save & Build

33. Check your console output for two items:

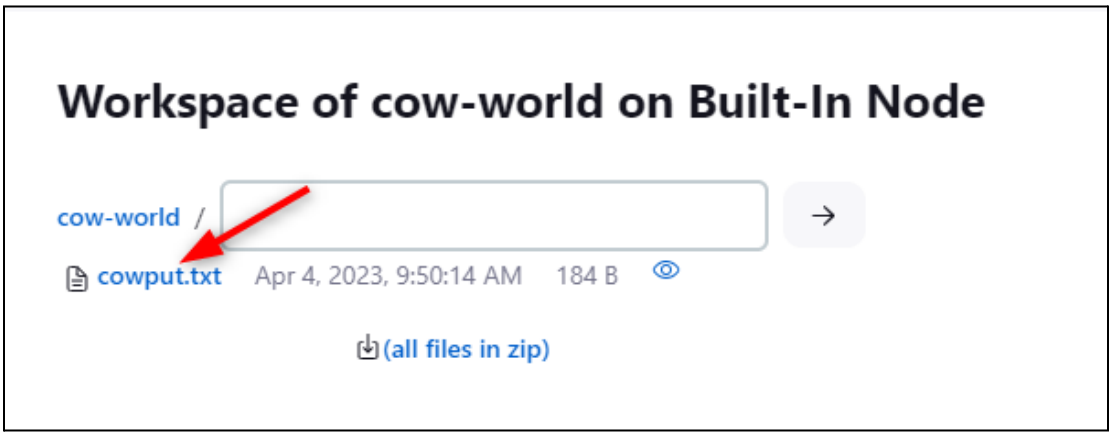
    a. check for what you echoed to the console

b. check for your cow

34. Click '**Back to Project**', and then click "**Workspace**" in the middle of the page




35. Click **cowput.txt** and see your cow




36. Click the **browser back button** to return to the Jenkins interface (don't close the browser tab, or you close the Jenkins interface)

37. Return to the main dashboard (click the "Jenkins" logo at the top left of the browser window)

Notify your instructor that you are done with the lab

END OF LAB