Deployment 3

First thing I did was launch the EC2 instance with my Jenkins application.
I then created a new Github Personal Token because my previous one expired.

Created a new ssh key to ssh into remote git repository.
I then cloned the repository to my ec2 instance so I can test the files when I edit it.

Created a new Jenkinsfile with the provided script from helpful instructions

```
pipeline {
    agent any
    stages {
        stage('test') {
            steps {
                sh '''#! /bin/bash
                python3 -m venv test3
                source test3/bin/activate
                pip install pip --upgrade
                pip install pytest
                py.test --verbose --junit-xml test-reports/results.xml sources/test_calc.py
                '''
                }
                post {
                    always {
                        junit 'test-reports/results.xml'
                    }
                }
            }
    }
}
```

I picked a multibranch Pipeline instead of a freestyle pipeline
Updated my credentials with a new github token key.
Github as branch source -> select credential on dropdown
Repository scan -> deployment 3
Leave the behaviors (had issues with this step)

Then press build now
Got the first successful test build and screenshotted it.

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Added Component / feature

My feature will be

- Allowing a user to subtract 3 values.

For the add2vals.py file,
I changed the two if statements to elifs and added one more elifs that checks if the argument numbers are equal to 3. If the arguments are 3 values, the program will call the sub3 function with the 3 arguments passed).

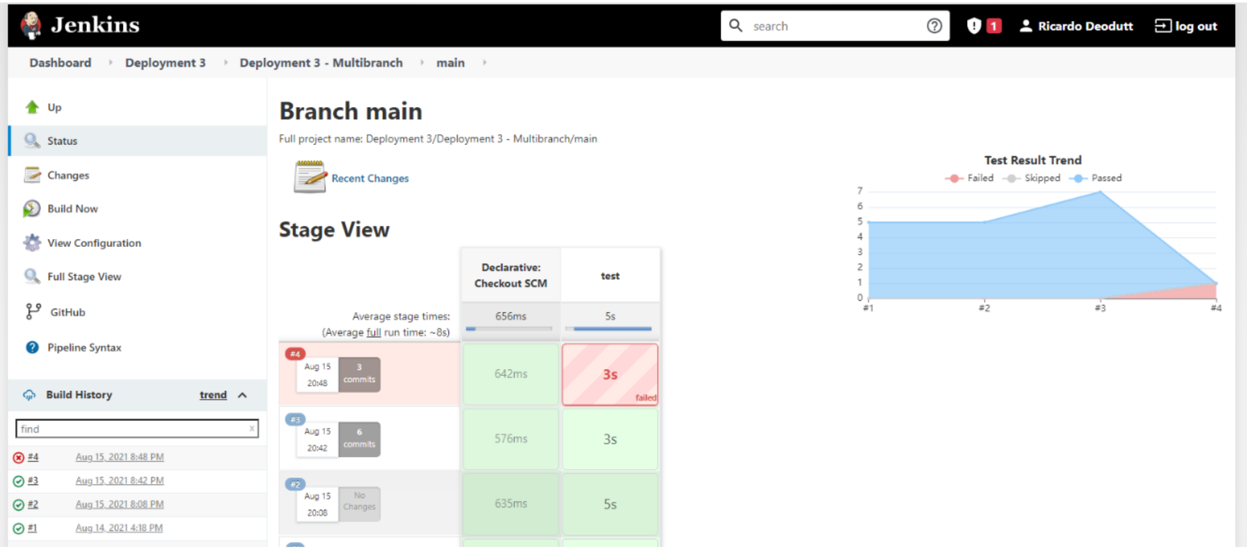
In the calc.py I added a new function called “sub3” that has 3 parameters in it.
I made arg3conv = conv(arg3) which basically calls the conv() function which tries to make the argument into an integer, float or if none of those works then a string. I also added a logical operator to check if the argument numbers are not equal to 2 and 3.

In the calc.py file, I created a new function called sub3. This function has 3 parameters passed because the function will subtract 3 numbers only. Each 3 arguments is passed into the conv() function which will simply turn the value into an integer. If it can't then it will try to turn it into a float and if that fails it will be turned into a string. Also I added another logical operator to line 38 which used the built in isinstance() function. This basically makes sure that if the argument is a string, it is a string.

In the test_calc.py file, I made new test cases that include the subtract methods. I copied the test cases before and duplicated them. I then altered each method to fit my case.

ERROR

Failed build



Branch main

Full project name: Deployment 3/Deployment 3 - Multibranch/main

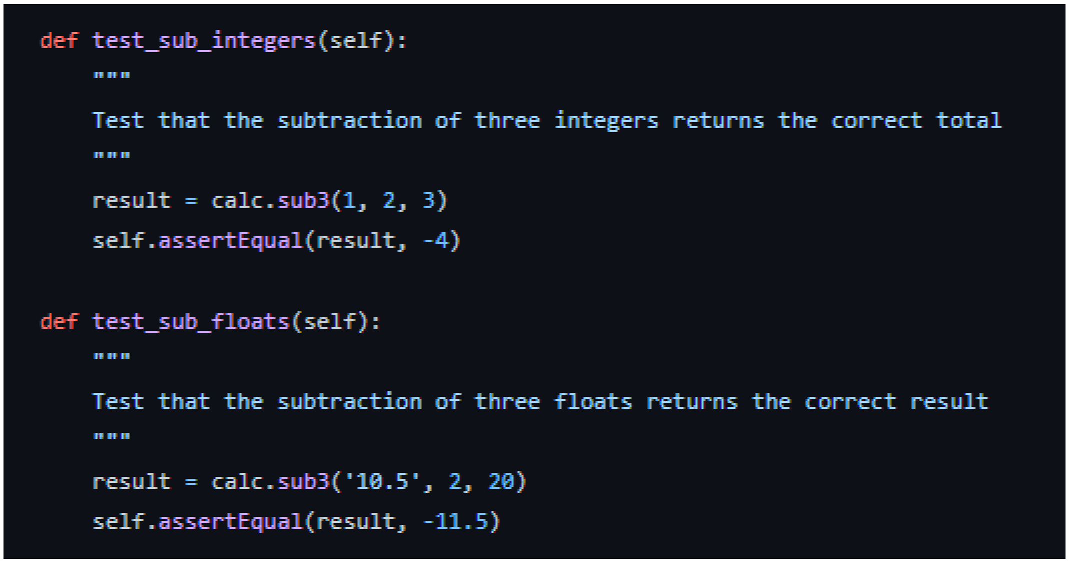
Stage View

	Declarative: Checkout SCM	test
Average stage times: (Average full run time: ~8s)	656ms	5s
#4 Aug 15 20:48 3 commits	642ms	3s failed
#3 Aug 15 20:42 6 commits	576ms	3s
#2 Aug 15 20:08 No Changes	635ms	5s

☒	#4	Aug 15, 2021 8:48 PM
✓	#3	Aug 15, 2021 8:42 PM
✓	#2	Aug 15, 2021 8:08 PM
✓	#1	Aug 14, 2021 4:18 PM

This test failed because the method “test_sub_strings(self) involves subtracting strings. In python you cannot subtract strings but you can add strings.

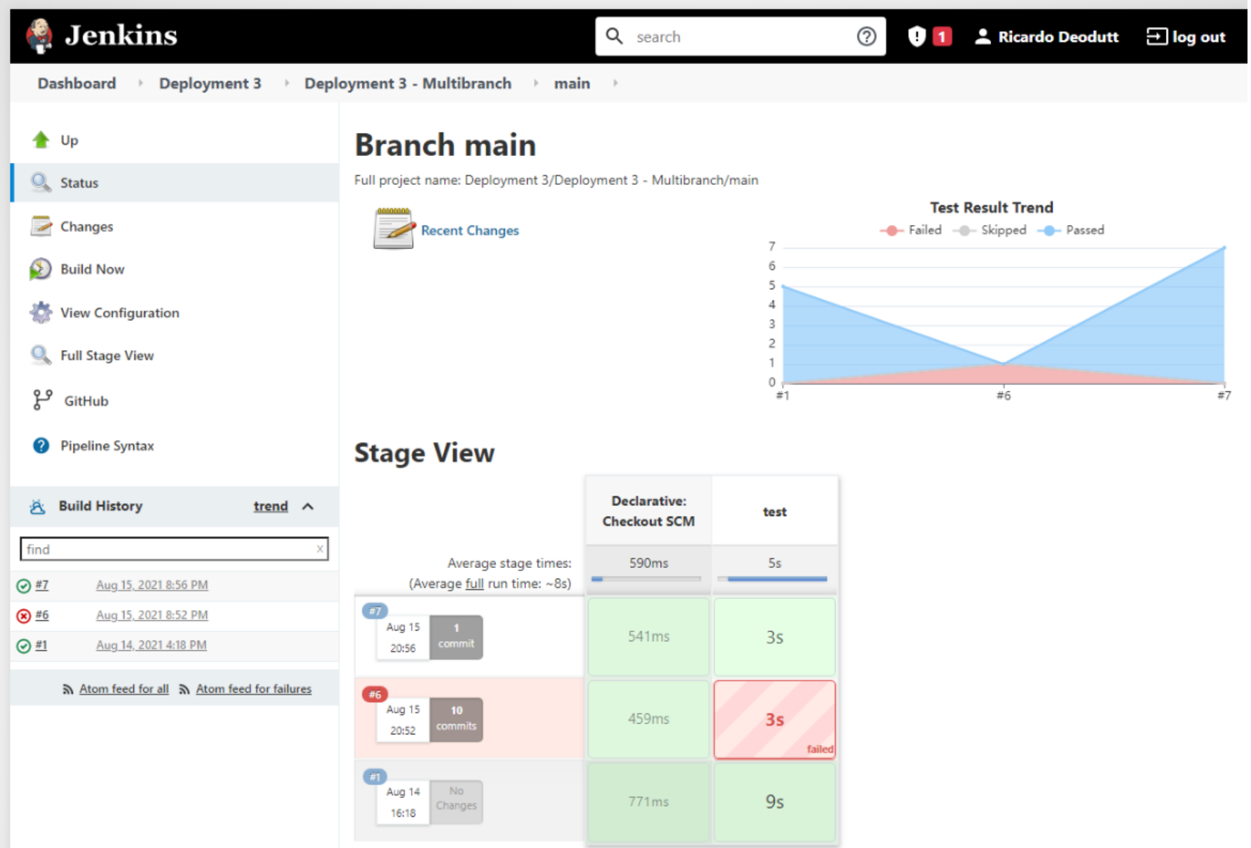
For this feature you **cannot subtract strings**. I realized this once when I ran a build in Jenkins and it failed. To fix this issue, I have to make test cases for only integers and floats.



```python
def test_sub_integers(self):
    """
    Test that the subtraction of three integers returns the correct total
    """
    result = calc.sub3(1, 2, 3)
    self.assertEqual(result, -4)

def test_sub_floats(self):
    """
    Test that the subtraction of three floats returns the correct result
    """
    result = calc.sub3('10.5', 2, 20)
    self.assertEqual(result, -11.5)
```

Successful test build after fix.



Dashboard › Deployment 3 › Deployment 3 - Multibranch › main ›

Build History trend

find

✓	#7	Aug 15, 2021 8:56 PM
✗	#6	Aug 15, 2021 8:52 PM
✓	#1	Aug 14, 2021 4:18 PM

Atom feed for all Atom feed for failures

Branch main

Full project name: Deployment 3/Deployment 3 - Multibranch/main

Recent Changes

Stage View

	Declarative: Checkout SCM	test
Average stage times: (Average full run time: ~8s)	590ms	5s
#7 Aug 15 20:56 1 commit	541ms	3s
#6 Aug 15 20:52 10 commits	459ms	3s failed
#1 Aug 14 16:18 No Changes	771ms	9s