Third Deployment

1. Create a EC2 instance with the following bash script

```
#!/bin/bash
sudo yum update –y
sudo wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat-
stable/jenkins.repo
sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io.key
sudo yum upgrade
sudo yum install jenkins java-1.8.0-openjdk-devel -y
sudo systemctl daemon-reload
sudo systemctl start jenkins
sudo yum install git -y
sudo yum install python3 -y
curl -O https://bootstrap.pypa.io/get-pip.py
python3 get-pip.py --user
```

2. Setup Jenkins

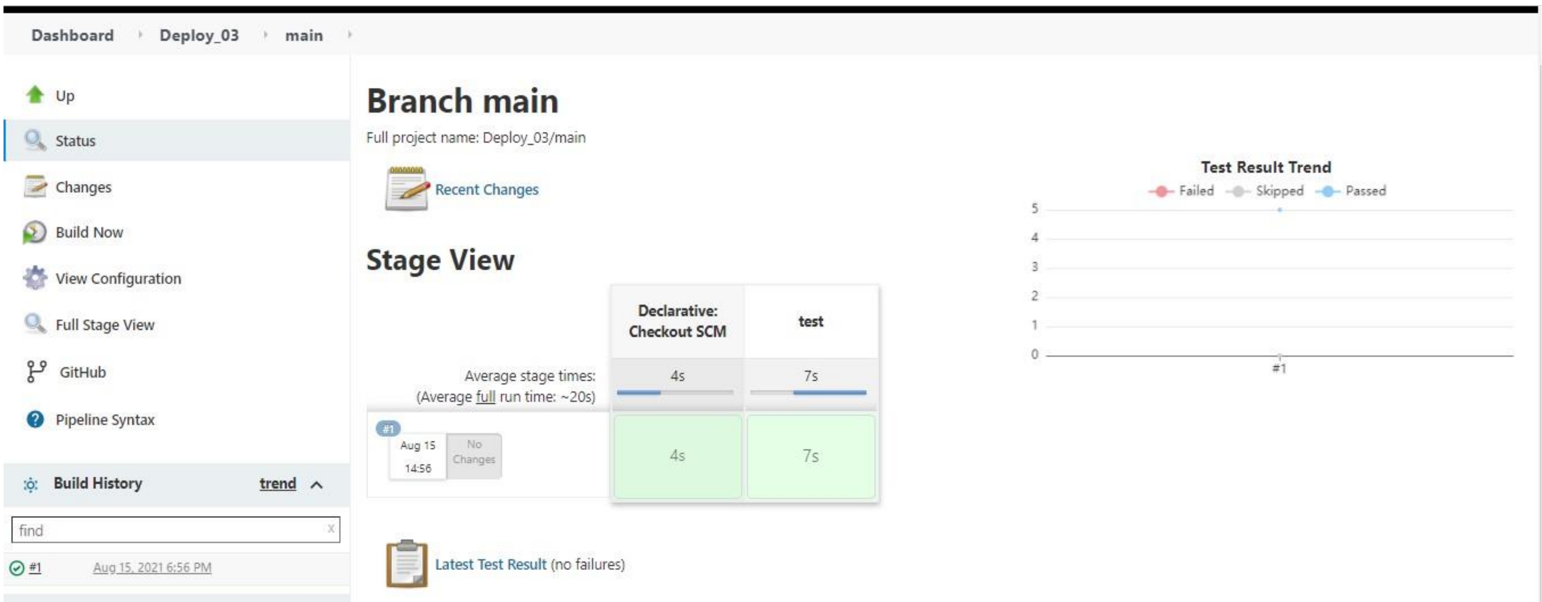
3. Create a multibranch-pipeline name Deploy_03 and link it to github through the branch sources.

4. I added a Jenkinsfile in my forked DEPLOY03_TEST repositories.

   Jenkinsfile below

```
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'
          }
          }
          }
  }
}
```

5. Screenshot of first successful test build



Branch main

Full project name: Deploy_03/main

Stage View

	Declarative: Checkout SCM	test
Average stage times: (Average full run time: ~20s)	4s	7s
#1 Aug 15 14:56 No Changes	4s	7s

#1 Aug 15, 2021 6:56 PM

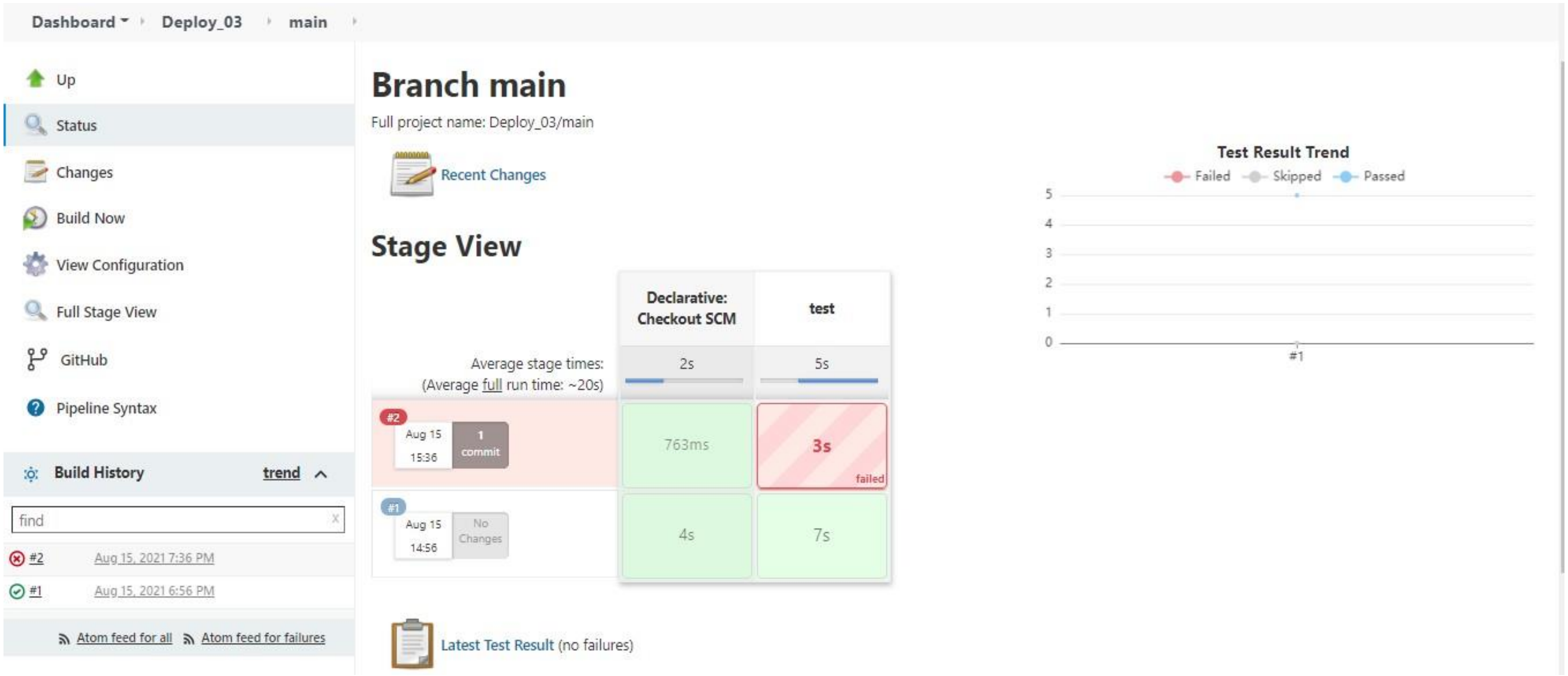
Latest Test Result (no failures)

6. Added Feature /Component

The subtraction feature: it takes two values adding them, subtracting them from one value then return the result.

```
#The 'add2_sub1' function itself
def add2_sub1(arg1, arg2, arg3):
    # Convert 'arg1' 'arg2' and 'arg3" to their appropriate types
    arg1conv = conv(arg1)
    arg2conv = conv(arg2)
    arg3conv = conv(arg3)
    # If either 'arg1' 'arg2'  or 'arg3' is a string, ensure they're both strings.
    if isinstance(arg1conv, str) or isinstance(arg2conv, str) or
isinstance(arg3conv, str):
        arg1conv = str(arg1conv)
        arg2conv = str(arg2conv)
        arg3conv = str(arg3conv)
    return arg1conv + arg2conv - arg3conv
```

7. Screenshot of failed test after added feature



Branch main

Full project name: Deploy_03/main

Stage View

	Declarative: Checkout SCM	test
Average stage times: (Average full run time: ~20s)	2s	5s
#2 Aug 15 15:36 1 commit	763ms	3s failed
#1 Aug 15 14:56 No Changes	4s	7s

#2 Aug 15, 2021 7:36 PM

#1 Aug 15, 2021 6:56 PM

Latest Test Result (no failures)

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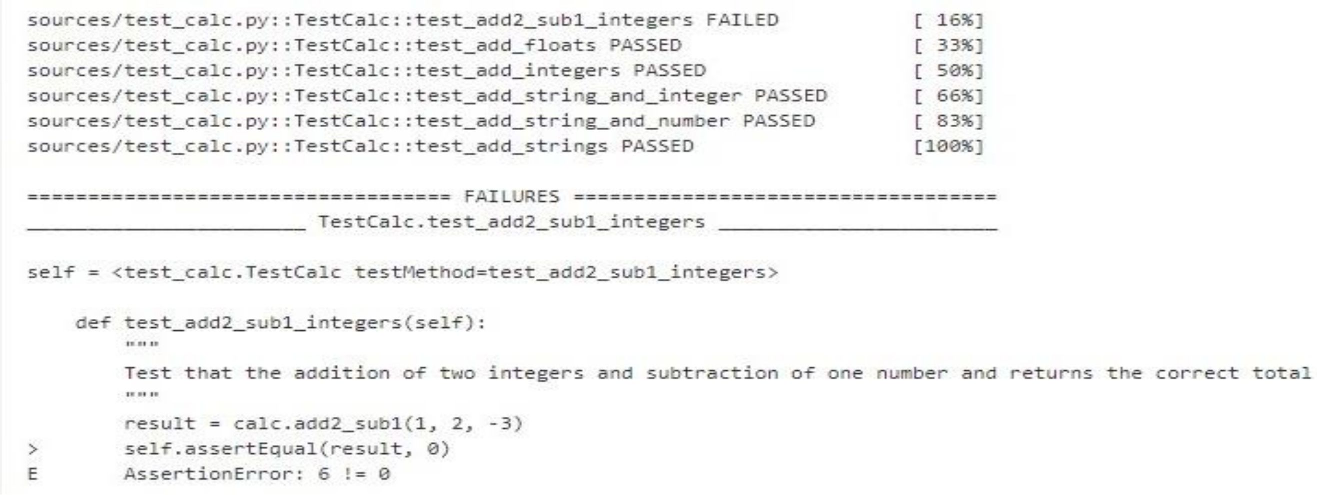
Reason why it failed

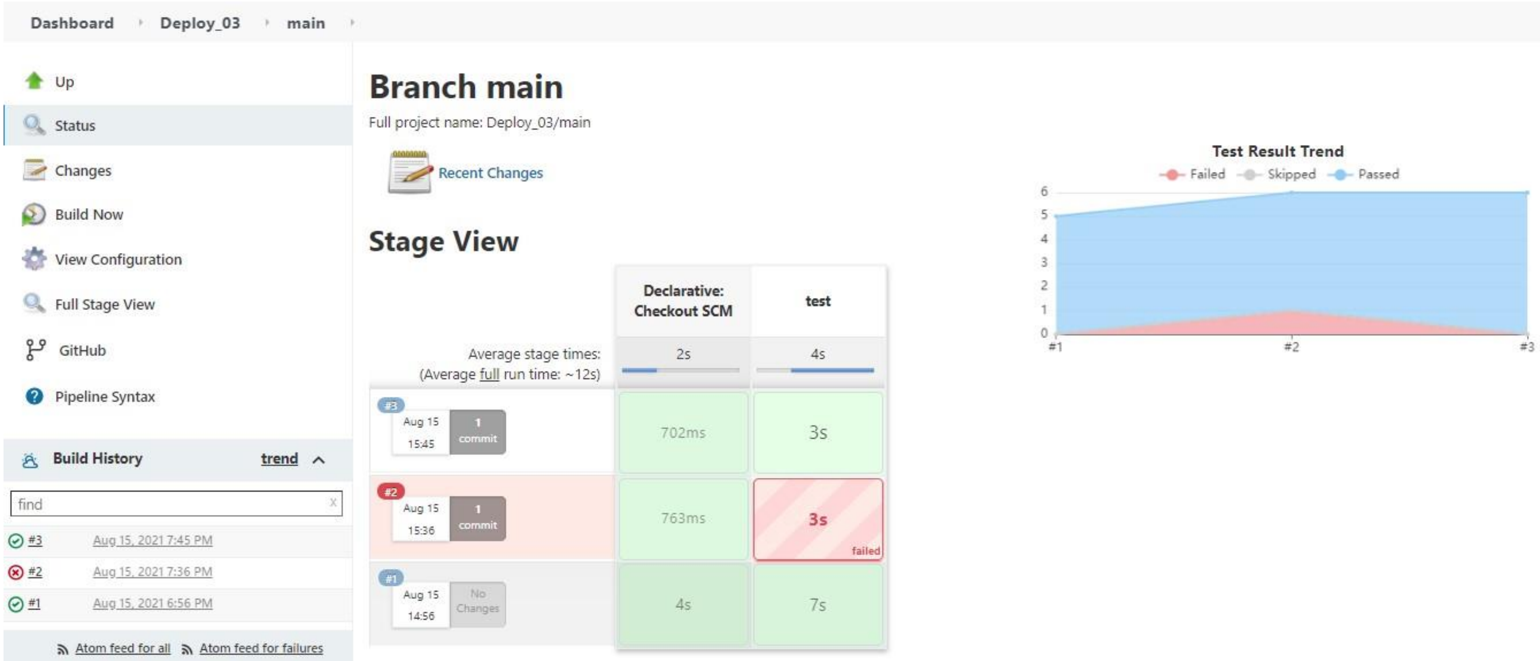


```
sources/test_calc.py::TestCalc::test_add2_sub1_integers FAILED          [ 16%]
sources/test_calc.py::TestCalc::test_add_floats PASSED                  [ 33%]
sources/test_calc.py::TestCalc::test_add_integers PASSED                [ 50%]
sources/test_calc.py::TestCalc::test_add_string_and_integer PASSED      [ 66%]
sources/test_calc.py::TestCalc::test_add_string_and_number PASSED       [ 83%]
sources/test_calc.py::TestCalc::test_add_strings PASSED                 [100%]

=================================== FAILURES ===================================
_______________________ TestCalc.test_add2_sub1_integers _______________________

self = <test_calc.TestCalc testMethod=test_add2_sub1_integers>

    def test_add2_sub1_integers(self):
        """
        Test that the addition of two integers and subtraction of one number and returns the correct total
        """
        result = calc.add2_sub1(1, 2, -3)
>       self.assertEqual(result, 0)
E       AssertionError: 6 != 0
```

```
def test_add2_sub1_integers(self):
        """
        Test that the addition of two integers and
subtraction of one number and returns the correct total
        """
        result = calc.add2_sub1(1, 2, -3)
        self.assertEqual(result, 0)
```

The result was not the same as the assert result. The three numbers 1, 2, -3 is not the same as 1, 2, 3. The sign magnitude in the 3 changes the results.

8. Screenshot of a successful test build with feature



Branch main

Full project name: Deploy_03/main

Recent Changes

Stage View

	Declarative: Checkout SCM	test
Average stage times: (Average full run time: ~12s)	2s	4s
#3 Aug 15 15:45 1 commit	702ms	3s
#2 Aug 15 15:36 1 commit	763ms	3s failed
#1 Aug 15 14:56 No Changes	4s	7s

#3	Aug 15, 2021 7:45 PM
#2	Aug 15, 2021 7:36 PM
#1	Aug 15, 2021 6:56 PM

To fix that the result was change to 6

```
def test_add2_sub1_integers(self):
        """
        Test that the addition of two integers and subtraction of one
number and returns the correct total
        """
        result = calc.add2_sub1(1, 2, -3)
        self.assertEqual(result, 6)
```