Demo

- Fork https://github.com/UncleSamTech/Lab8
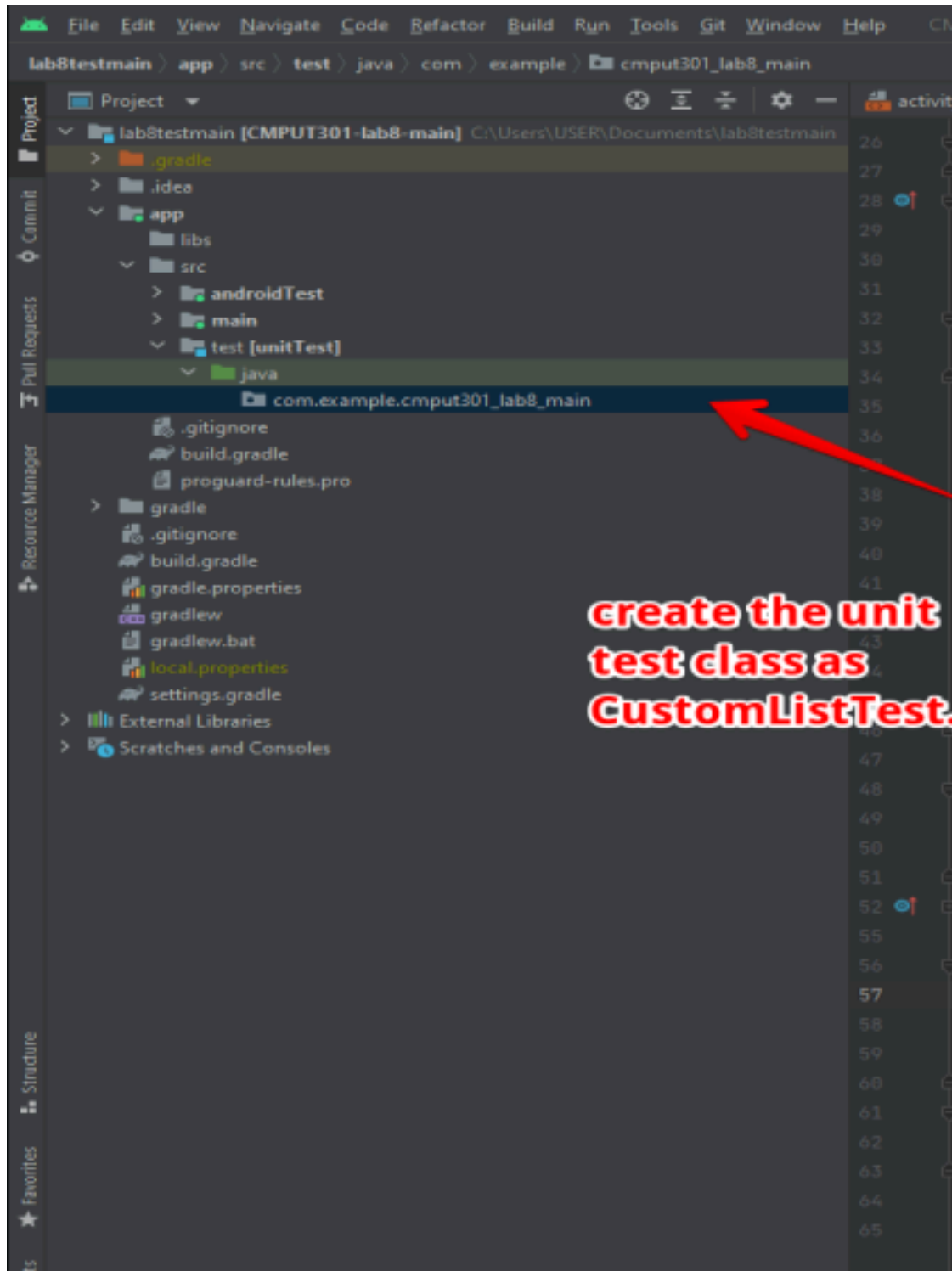- Click on Actions and select "I understand my workflows, go ahead and enable them"
  - You can now view the "Android CI" action, which will automatically run the next time you push or PR to main
- Create a unit test class as you did in Lab 6
  - (see next slides)
- Create a simple test method that attempts to add content to our CustomList.
    - The test would fail, commit and push this. GitHub Actions would attempt to run the Gradle build which would fail and a failed test icon (x) would appear
- Implement the addCity() method in CustomList class, commit and push
  - GitHub Actions would run automatically again and this time the test will pass

Creating a UNIT Test Class

Create the Add Method

- Create the addCity method in CustomList.java class

```java
/**
* this gets size of the list
* @return
*/
public int getCount(){
   return cities.size();
}

/**
* this adds a city object to the list
*for the first phase it will be
empty * @param city
*/
public void addCity(City city){

}
```

Implement The Test Method

- Create an object for CustomList before running the test

```java
private CustomList list;
/**
* create a mocklist for my citylist
* @return
*/


public CustomList MockCityList(){
    list = new CustomList(null,new ArrayList<>());
    return list;
}
```

We just created a simple empty list. We can initialize this list in many ways

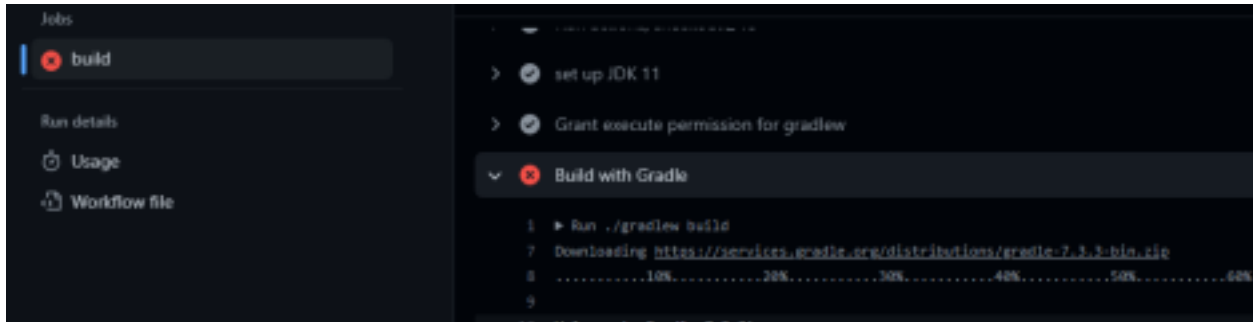- Add the test method to test your addCity method

```java
/**
* get the size of the list
* increase the list by adding a new city
* check if our current size matches the initial size
plus one
*/

@Test
public void addCityTest(){
  list = MockCityList();
  int listSize = list.getCount();
  list.addCity(new City("Estevan", "SK"));
  assertEquals(list.getCount(),listSize + 1);
}
```

Commit and Push the Test

This should fail in the GitHub actions

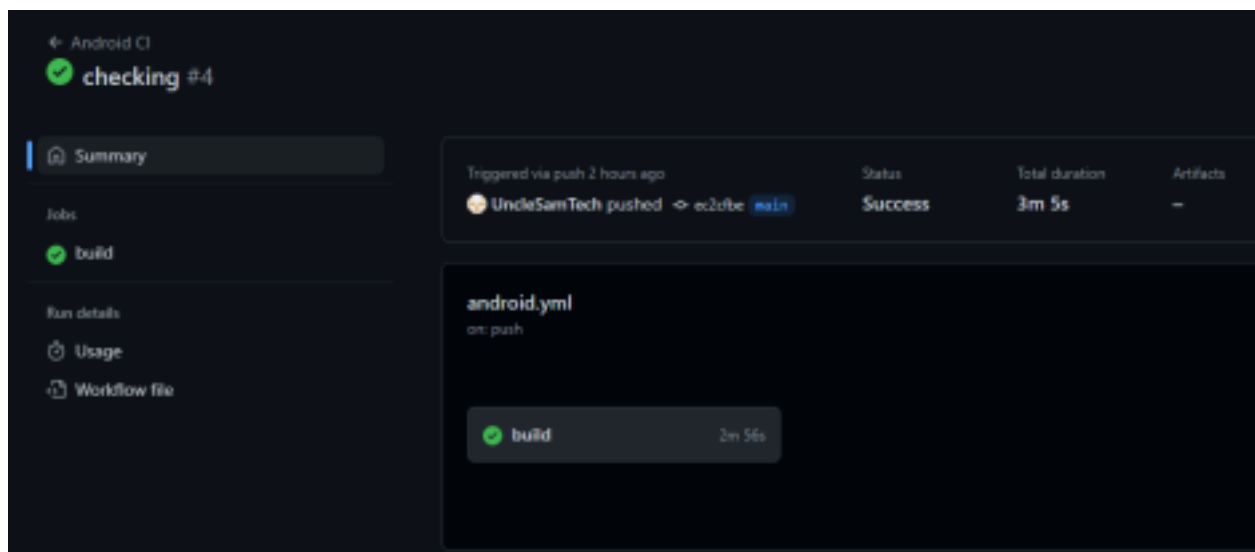Implement the addCity method and Push Changes

```
/**
* this adds a city object to the list
*the second phase, you can add the
city * @param city
*/
public void addCity(City city){
    cities.add(city);
}
```

Test your changes locally to see if it passes

Commit and Push the Changes to GitHub

Once changes have been pushed to the main branch,
the GitHub actions will automatically trigger and re-run
the tests.

This would pass now

REFERENCES

https://docs.github.com/en/actions/learn-github-actions/understanding-github-actions

https://eclass.srv.ualberta.ca/pluginfile.php/10617131/mod_resource/content/13/CMPUT%20301%20Lab%208.pdf