INTRODUCTION TO SOFTWARE ENGINNERING ASSIGNMENT.

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BATCH: MONDAY 8.30 A.M TO 10.30 A.M, VENUE: IT LAB (MAURITIAN TIME)

Introduction

A very brief overview of the assignment that I have completed consist of 2 programs. One displays an image of the season depending on the use input whereas the other program will display messages on the screen depending on the user input or input from a file to help the user figure out if the temperature is high or low and more.

Module description

Original codes (before refactoring)

For the first program -the season program (country name and year.py) -, I have designed and implemented 3 modules, namely Name_Month() ,season1() and image()

Modularity

(i)country_name_and_year.py

Note:

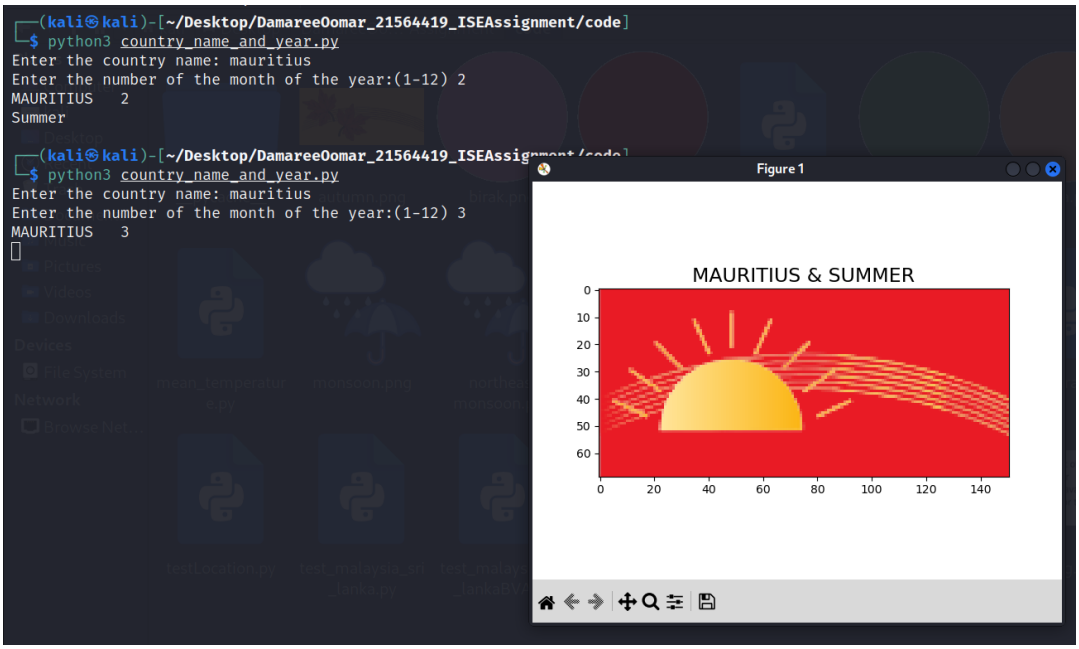
1. 'country name and year.py' or country_name_and_year.py will need the following in the same folder to work properly.
   autumn.png
   birak.png
   bunuru.png
   dijiba.png
   djeran.png
   inter-monsoon.png
   kambarang.png
   makuru.png
   monsoon.png
   northeast monsoon.png
   southeast monsoon.png
   spring.png
   summer.png
   winter.png
   wrong.png

To run country_name_and_year.py, the user will have to follow the prompts on the screen as shown below. The user has to enter the name of the country and the number of the month in order to determine the season

If the country name is wrong or not present in our database and the month number is right, the user will be prompted an error message.

If the country name is right but the month number is wrong, the program will prompt the user till he enters a correct month number.

Then, as output, the picture of the season and the country name along with the name of the season will appear as title of the picture.



Modularity concept review(before refactoring the code)

Item	Checklist question related to modularity	Yes/No	How many times does it happens if no and applicable	Description of the issue if No is the answer?
1	Is the number of global variables zero?	No	2 global variables	Can cause ambiguity and might become difficult to bring change to the program /high coupling
2	Do all our functions take parameters which do not acts as control flags?	No	3 times	Causes low cohesion and high coupling
3	Are all functions performing only a single distinct task?	No	1 time	Cause low cohesion
4	are we reusing our function to do the same task?	No	nil	Doing redundancy
5	Is there no overlapping of our code in our modules/functions/programs?	No	2	Doing redundancy
6	Are we using all part of our code?	No	1	Causing ambiguity and decreasing readability. Might cause an issue

				while debugging and refactoring.

Modularity concept review(After refactoring the code)

Item	Checklist question related to modularity	Yes/No	How many times does it happens if no and applicable	Description of the issue if No is the answer?
1	Is the number of global variables zero?	No	2 global variables	Can cause ambiguity and might become difficult to bring change to the program /high coupling
2	Do all our functions take parameters which do not acts as control flags?	No	7 times	Causes low cohesion and high coupling
3	Are all functions performing only a single distinct task?	Yes	nil	Cause low cohesion
4	are we reusing our function to do the same task?	No		Doing redundancy
5	Is there no overlapping of our code in our modules/functions/programs?	Yes	nil	Doing redundancy
6	Are we using all part of our code?	yes	nil	Causing ambiguity and decreasing readability. Might cause an issue while debugging and refactoring.

Various places we have decreased the level of redundancy, but it has increased the level of coupling.

Black-box testing

(i)country_name_and_year.py

Assumption: Name_month() module prevent any input of number of month to be out of the range of 1 and 12

Equivalence Partitioning

mauritius()		
Category (month)	**Test Data**	**Results(season)**
10< month< 13 or 1<= month <= 4	month = 3	season = "Summer"

month = 5	month = 5	season = "Autumn"
5 < month < 10	month = 7	season = "Winter"
month = 10	month = 10	season = "Spring"

Equivalence Partitioning

australia1()		
Category (month)	Test Data	Results(season)
month = 12 or 1<= month <= 2	month = 12	season = "Summer"
2< month < 6	month = 5	season = "Autumn"
5 < month < 9	month = 7	season = "Winter"
8< month < 12	month = 10	season = "Spring"

Equivalence Partitioning

australia2()		
Category (month)	**Test Data**	**Results(season)**
month = 12 or month = 1	month = 1	season ="Birak"
month = 2 or month = 3	month =2	season = "Bunuru"
month = 4 or month = 5	month =4	season = "Djeran"
month = 6 or month = 7	month =6	season = "Makuru"
month = 8 or month = 9	month =8	season = "Djilba"
month = 10 or month = 11	month = 10	season = "Kambarang"

Equivalence Partitioning

spain_japan()		
Category (month)	**Test Data**	**Results(season)**
month = 12 or 1<= month <= 2	month = 12	season = "Winter"
2< month < 6	month = 5	season = "Spring"
5 < month < 9	month = 7	season = "Summer"
8< month < 12	month = 10	season = "Autumn"

Equivalence Partitioning

malaysia_sri_lanka()		
Category (month)	**Test Data**	**Results(season)**
month = 12 or 1<= month <= 2	month = 1	season = "Northeast Monsoon"
month = 3 or month =4	month = 3	season ="Inter-monsoon"
5<= month <= 9	month = 8	season = "Southeast Monsoon"
month = 10 or month = 11	month =10	season ="Inter-monsoon"

Boundary value analysis

malaysia_sri_lanka()

boundary	**value(month)**	**results (season)**
Boundary between "Northeast Monsoon" and "Inter-monsoon"	month = 2	season = "Northeast Monsoon"
	month = 3	season = "Inter-monsoon"
Boundary between "Inter-monsoon" and "Southeast Monsoon"	month = 4	season = "Inter-monsoon"
	month = 5	season= "Southeast Monsoon"
Boundary between "Inter-monsoon" and "Southeast Monsoon"	month = 9	season= "Southeast Monsoon"
	month = 10	season = "Inter-monsoon"
Boundary between "Northeast Monsoon" and "Inter-monsoon"	month = 11	season = "Inter-monsoon"
	month = 12	season = "Northeast Monsoon"

(ii) mean_temperature.py

Assumption: it is very complicated to design black-box testing modules for this program and white-box testing will be better

White-box testing

(i)country_name_and_year.py

Name_Month()

Path	**Test Data**	**Expected Results**
name of country is inserted and loop is not entered because input of date is correct	line = "Damaree\n12\n"	"Enter the country name: Enter the number of the month of the year:(1-12) DAMAREE 12\n"
name of country is inserted and loop is entered because of wrong input of date	line = "Dubai\n4419\n2"	"Enter the country name: Enter the number of the month of the year:(1-12) Wrong input of month number. Try again (1 -12) DUBAI 2\n"

location()

Path	**Test Data (country, month)**	**Expected Results**
country is Australia and passes through the first option of the loop	country ="AUSTRALIA",month = 1 , line ="1/n"	season ="Summer"
country is Australia and passes through the second option of the loop	country ="AUSTRALIA",month = 1, line ="2/n"	season = "Birak"

country is Mauritius	country ="MAURITIUS",month = 1	season ="Summer"
country is Spain	country ="SPAIN",month = 1	season = "Winter"
country is Japan	country = "JAPAN", month =3	season = "Spring"
country is sri lanka	country = "SRI LANKA", month = 5	season = "Southeast Monsoon"
country is Malaysia	country = "MALAYSIA", month =11	season ="Inter-monsoon"
country input is wrong	country = "ASD",month = 4	season ="Wrong"

(ii) mean_temperature.py

choice()

Category (input1,list1,error,message)	**Test Data**	**Results(month number and country name)**
input is in list	input1 = 1 , list1 = [1,2,34], error = "error", message = "not in list"	input1 = 1
input is not in list	input1 = 5 , list1 = [1,2,34], error = "error", message = "not in list"	"error/nnot in list"

Detector()

Category (location,time,temp)	**Test Data**	**Results**
location is Perth, time morning and temp equal to average	location = 'perth', time = "M", temp = 18.2	""The temperature is equal to the average.\n"
location is Perth, time morning and temp above average but less than 5.0 c difference	location = 'perth', time = "M", temp = 20.0	"The temperature is greater than the average this morning in Perth.\n\n"
location is Perth, time morning and temp above average but greater than 5.0 difference but less than maximum temperature	location = 'perth', time = "M", temp = 28.0	The temperature is greater than the average this morning in Perth.\n\nThe difference from the mean temperature is more than 5.0 C\n\n\n
location is Perth, time morning and temp above average but greater than 5.0 difference but	location = 'perth', time = "M", temp = 47.0	"The temperature is greater than the average this morning in Perth.\n\nThe difference between the mean is greater than 5.0 C and the temperature is

more than maximum temperature		above the maxmimum temperature in this area.\n\n\n"
location is Perth, time morning and temp below average but less than 5.0 c difference	location = 'perth', time = "M", temp = 16.0	"The temperature is below average this morning in Perth.\n\n"
location is Perth, time morning and temp below average but greater than 5.0 difference but greater than minimum temperature	location = 'perth', time = "M", temp = 10.0	"The temperature is below average this morning in Perth.\n\nThe difference from the mean temperature is above 5.0 C\n\n\n"
location is Perth, time morning and temp below average but greater than 5.0 difference but lower than minimum temperature	location = 'perth', time = "M", temp = 0.0	"The temperature is below average this morning in Perth.\n\nThe difference between the mean is greater than 5.0 C and the temperature is below the minimum temperature in this area.\n\n\n"
location is Perth, time evening and temp equal to average	location = 'perth', time = "A", temp = 23.0	"The temperature is equal to the average.\n"
location is Perth, time evening and temp above average but less than 5.0 c difference	location = 'perth', time = "A", temp = 25.0	"The temperature is greater than the average this afternoon in Perth.\n\n"
location is Perth, time evening and temp above average but greater than 5.0 difference but greater than maximum temperature	location = 'perth', time = "A", temp = 29.0	"The temperature is greater than the average this afternoon in Perth.\n\nThe difference from the mean temperature is more than 5.0 C\n\n\n"
location is Perth, time evening and temp above average but greater than 5.0 difference but more than maximum temperature	location = 'perth', time = "A", temp = 48.0	"The temperature is greater than the average this afternoon in Perth.\n\nThe difference between the mean is greater than 5.0 C and the temperature is above the maxmimum temperature in this area.\n\n\n"
location is Perth, time evening and temp below average but less than 5.0 c difference	location = 'perth', time = "A", temp = 22.0	"The temperature is below average this afternoon in Perth.\n\n"
location is Perth, time evening and temp below average but greater than 5.0 difference but higher than minimum temperature	location = 'perth', time = "A", temp = 17.0	"The temperature is below average this afternoon in Perth.\n\nThe difference from the mean temperature is above 5.0 C\n\n\n"
location is Perth, time evening and temp below average but greater than 5.0 difference but lower than minimum temperature	location = 'perth', time = "A", temp = -1	"The temperature is below average this afternoon in Perth.\n\nThe difference between the mean is greater than 5.0 C and the temperature is below the minimum temperature in this area.\n\n\n"
location is Adelaide, time morning and temp equal to average	location = 'adelaide',	""The temperature is equal to the average.\n"

	time = "M", temp = 16.5	
location is Adelaide, time morning and temp above average but less than 5.0 c difference	location = 'adelaide', time = "M", temp = 18.0	"The temperature is greater than the average this morning in Adelaide.\n\n"
location is Adelaide, time morning and temp above average but greater than 5.0 difference but less than maximum temperature	location = 'adelaide', time = "M", temp = 22.0	The temperature is greater than the average this morning in Adelaide.\n\nThe difference from the mean temperature is more than 5.0 C\n\n\n
location is Adelaide, time morning and temp above average but greater than 5.0 difference but more than maximum temperature	location = 'adelaide', time = "M", temp = 50.0	"The temperature is greater than the average this morning in Adelaide.\n\nThe difference between the mean is greater than 5.0 C and the temperature is above the maxmimum temperature in this area.\n\n\n"
location is Adelaide, time morning and temp below average but less than 5.0 c difference	location = 'adelaide', time = "M", temp = 16.0	"The temperature is below average this morning in Adelaide.\n\n"
location is Adelaide, time morning and temp below average but greater than 5.0 difference but higher than minimum temperature	location = 'adelaide', time = "M", temp = 3.0	"The temperature is below average this morning in Adelaide.\n\nThe difference from the mean temperature is above 5.0 C\n\n\n"
location is Adelaide, time morning and temp below average but greater than 5.0 difference but lower than minimum temperature	location = 'adelaide', time = "M", temp = -2.0	"The temperature is below average this morning in Adelaide.\n\nThe difference between the mean is greater than 5.0 C and the temperature is below the minimum temperature in this area.\n\n\n"
location is Adelaide, time evening and temp equal to average	location = 'adelaide', time = "A", temp = 21.0	"The temperature is equal to the average.\n"
location is Adelaide, time evening and temp above average but less than 5.0 c difference	location = 'adelaide', time = "A", temp = 23.0	"The temperature is greater than the average this afternoon in Adelaide.\n\n"
location is Adelaide, time evening and temp above average but greater than 5.0 difference but less than maximum temperature	location = 'adelaide', time = "A", temp = 35.0	"The temperature is greater than the average this afternoon in Adelaide.\n\nThe difference from the mean temperature is more than 5.0 C\n\n\n"
location is Adelaide, time evening and temp above average but greater than 5.0 difference but more than maximum temperature	location = 'adelaide', time = "A", temp = 55.0	"The temperature is greater than the average this afternoon in Adelaide.\n\nThe difference between the mean is greater than 5.0 C and the temperature is above the maxmimum temperature in this area.\n\n\n"
location is Adelaide, time evening and temp below	location = 'adelaide',	"The temperature is below average this afternoon in Adelaide.\n\n"

average but less than 5.0 c difference location is Adelaide, time evening and temp below average but greater than 5.0 difference but higher than minimum temperature	time = "A", temp = 19.0 location = 'adelaide', time = "A", temp = 14.0	"The temperature is below average this afternoon in Adelaide.\n\nThe difference from the mean temperature is above 5.0 C\n\n\n"
location is Adelaide, time evening and temp below average but greater than 5.0 difference but lower than minimum temperature	location = 'adelaide', time = "A", temp = -5.0	"The temperature is below average this afternoon in Adelaide.\n\nThe difference between the mean is greater than 5.0 C and the temperature is below the minimum temperature in this area.\n\n\n"

Test implementation and execution

(i)country_name_and_year.py

	Done
	Not done

Module name	BB test design (EP)	BB test design (BVA)	WB test design	EP test code(implemented/run)	BVA test code(implemented/run)	White-box testing (implemented /run)
Name_month()						Framework used
mauritius()				Framework not used		
spain_japan()						
australia_1()				Framework not used		
australia_2()				Framework used		
malaysia_sri_lanka()				Framework used	Framework used	
location()						Framework used
image()						

(ii) mean_temperature.py

Module name	BB test design (EP)	BB test design (BVA)	WB test design	EP test code(implemented/run)	BVA test code(implemented/run)	White-box testing (implemented /run)
choice()						
InputFile()						
Detector()						Framework used

Running the tests

For all using modules not using frameworks:

```
┌──(kali㉿kali)-[~/Desktop/DamareeOomar_21564419_ISEAssignment/code]
└─$ python3 testaustralia1.py
Traceback (most recent call last):
  File "/home/kali/Desktop/DamareeOomar_21564419_ISEAssignment/code/testaustralia1.py", line 12, in <module>
    testaustralia_1()
  File "/home/kali/Desktop/DamareeOomar_21564419_ISEAssignment/code/testaustralia1.py", line 5, in testaustralia_1
    assert "Summer" == country_name_and_year.australia_1(12), "month = 12 or month =1 or month =2 "
           ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
AssertionError: month = 12 or month =1 or month =2

┌──(kali㉿kali)-[~/Desktop/DamareeOomar_21564419_ISEAssignment/code]
└─$ python3 testmauritius\(\).py
Traceback (most recent call last):
  File "/home/kali/Desktop/DamareeOomar_21564419_ISEAssignment/code/testmauritius().py", line 12, in <module>
    testmauritius()
  File "/home/kali/Desktop/DamareeOomar_21564419_ISEAssignment/code/testmauritius().py", line 5, in testmauritius
    assert "Summer" == country_name_and_year.mauritius(3), "10< month <13 or 1 ≤ month ≤4"
                       ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
AttributeError: module 'country_name_and_year' has no attribute 'mauritius'. Did you mean: 'mauritus'?

┌──(kali㉿kali)-[~/Desktop/DamareeOomar_21564419_ISEAssignment/code]
└─$ 
```

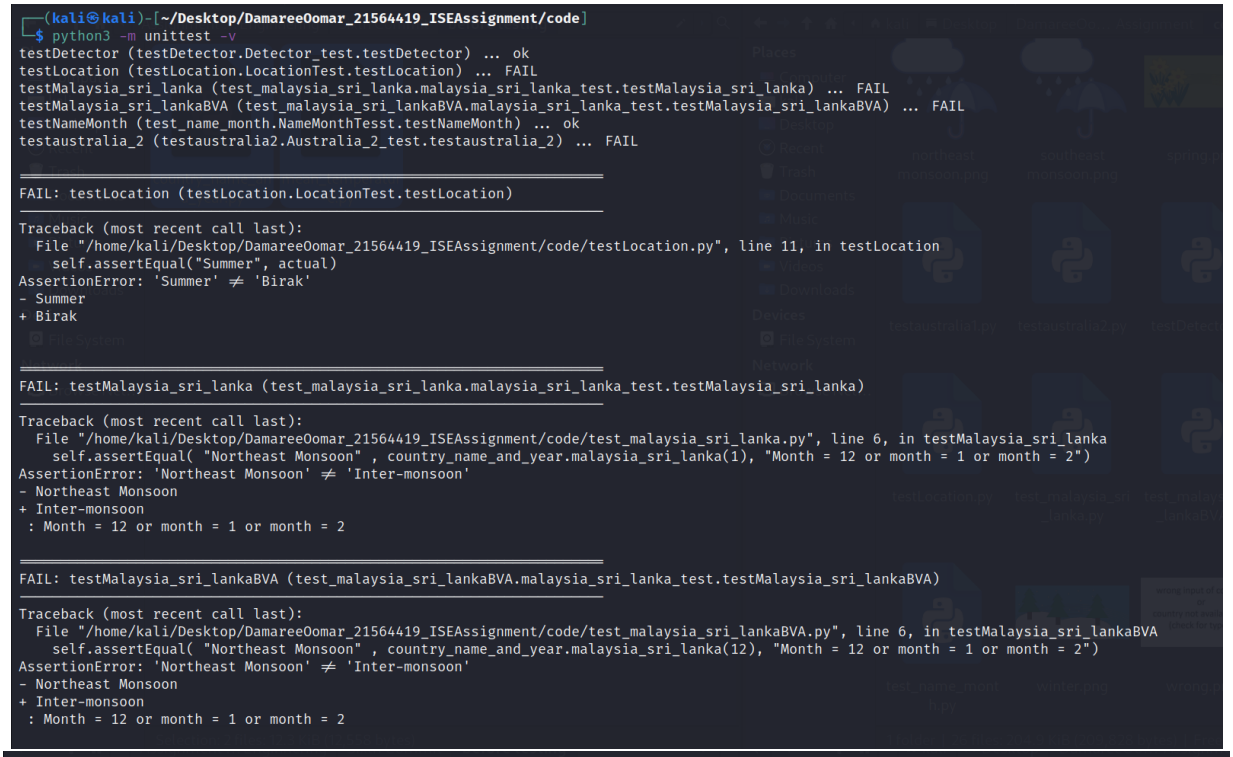
Summary of errors:

mauritius was wrongly written in the code. It was written as ‘mauritus’

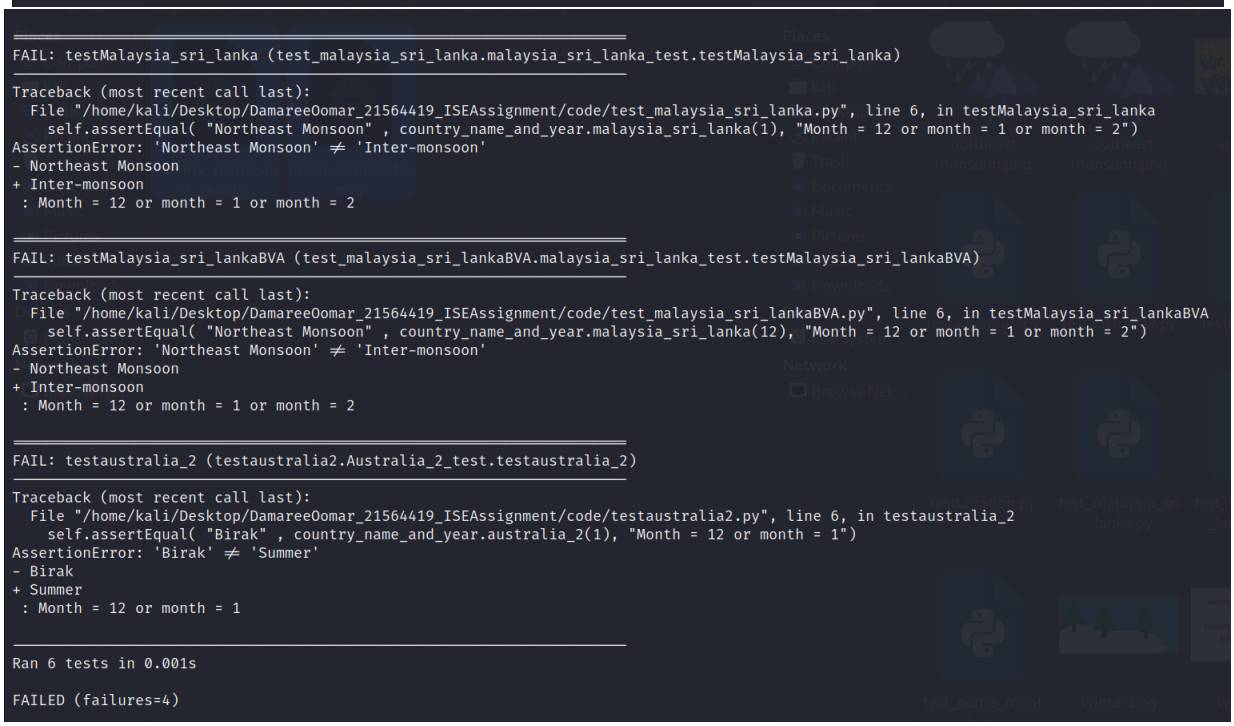
Noogar seasons was assign instead of the traditional seasons

Some seasons in the mauritius() module were wrongly assigned.

For all modules using framework:



```
┌──(kali㉿kali)-[~/Desktop/DamareeOomar_21564419_ISEAssignment/code]
└─$ python3 -m unittest -v
testDetector (testDetector.Detector_test.testDetector) ... ok
testLocation (testLocation.LocationTest.testLocation) ... FAIL
testMalaysia_sri_lanka (test_malaysia_sri_lanka.malaysia_sri_lanka_test.testMalaysia_sri_lanka) ... FAIL
testMalaysia_sri_lankaBVA (test_malaysia_sri_lankaBVA.malaysia_sri_lanka_test.testMalaysia_sri_lankaBVA) ... FAIL
testNameMonth (test_name_month.NameMonthTesst.testNameMonth) ... ok
testaustralia_2 (testaustralia2.Australia_2_test.testaustralia_2) ... FAIL

======================================================================
FAIL: testLocation (testLocation.LocationTest.testLocation)
----------------------------------------------------------------------
Traceback (most recent call last):
  File "/home/kali/Desktop/DamareeOomar_21564419_ISEAssignment/code/testLocation.py", line 11, in testLocation
    self.assertEqual("Summer", actual)
AssertionError: 'Summer' != 'Birak'
- Summer
+ Birak


======================================================================
FAIL: testMalaysia_sri_lanka (test_malaysia_sri_lanka.malaysia_sri_lanka_test.testMalaysia_sri_lanka)
----------------------------------------------------------------------
Traceback (most recent call last):
  File "/home/kali/Desktop/DamareeOomar_21564419_ISEAssignment/code/test_malaysia_sri_lanka.py", line 6, in testMalaysia_sri_lanka
    self.assertEqual( "Northeast Monsoon" , country_name_and_year.malaysia_sri_lanka(1), "Month = 12 or month = 1 or month = 2")
AssertionError: 'Northeast Monsoon' != 'Inter-monsoon'
- Northeast Monsoon
+ Inter-monsoon
 : Month = 12 or month = 1 or month = 2

======================================================================
FAIL: testMalaysia_sri_lankaBVA (test_malaysia_sri_lankaBVA.malaysia_sri_lanka_test.testMalaysia_sri_lankaBVA)
----------------------------------------------------------------------
Traceback (most recent call last):
  File "/home/kali/Desktop/DamareeOomar_21564419_ISEAssignment/code/test_malaysia_sri_lankaBVA.py", line 6, in testMalaysia_sri_lankaBVA
    self.assertEqual( "Northeast Monsoon" , country_name_and_year.malaysia_sri_lanka(12), "Month = 12 or month = 1 or month = 2")
AssertionError: 'Northeast Monsoon' != 'Inter-monsoon'
- Northeast Monsoon
+ Inter-monsoon
 : Month = 12 or month = 1 or month = 2
```



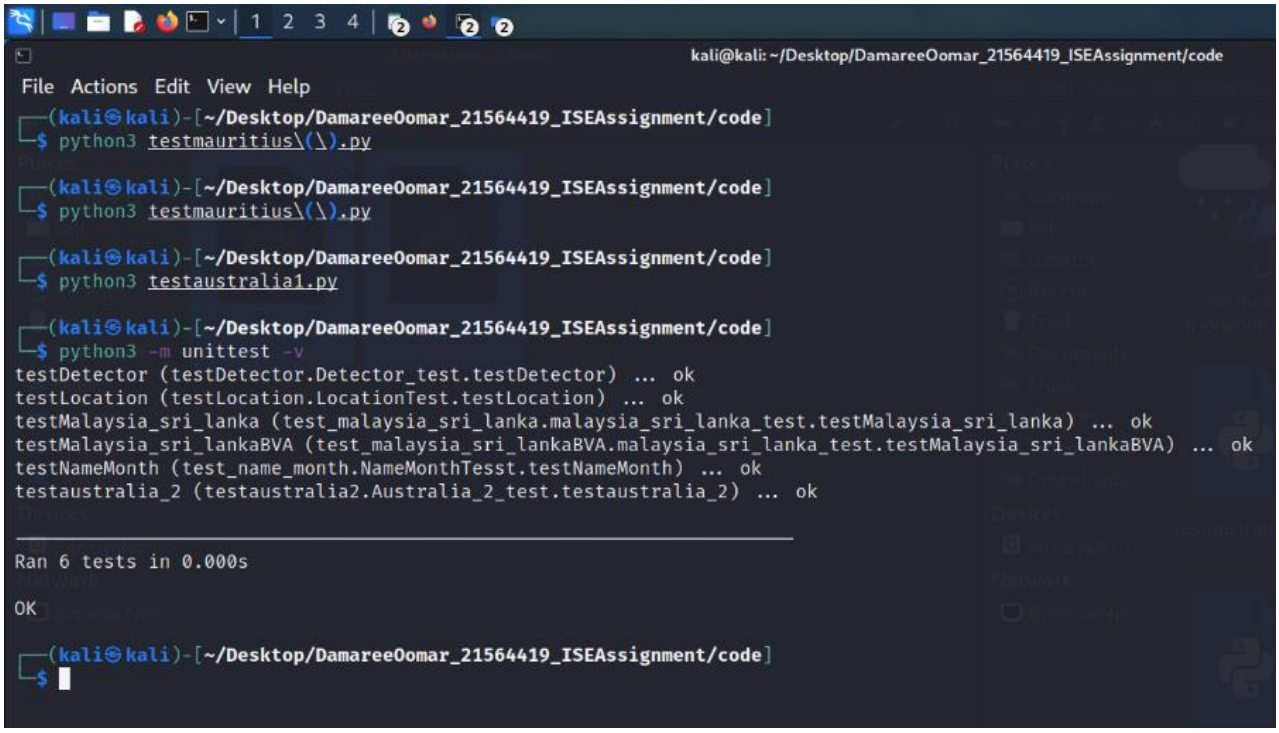
```
======================================================================
FAIL: testMalaysia_sri_lanka (test_malaysia_sri_lanka.malaysia_sri_lanka_test.testMalaysia_sri_lanka)
----------------------------------------------------------------------
Traceback (most recent call last):
  File "/home/kali/Desktop/DamareeOomar_21564419_ISEAssignment/code/test_malaysia_sri_lanka.py", line 6, in testMalaysia_sri_lanka
    self.assertEqual( "Northeast Monsoon" , country_name_and_year.malaysia_sri_lanka(1), "Month = 12 or month = 1 or month = 2")
AssertionError: 'Northeast Monsoon' != 'Inter-monsoon'
- Northeast Monsoon
+ Inter-monsoon
 : Month = 12 or month = 1 or month = 2

======================================================================
FAIL: testMalaysia_sri_lankaBVA (test_malaysia_sri_lankaBVA.malaysia_sri_lanka_test.testMalaysia_sri_lankaBVA)
----------------------------------------------------------------------
Traceback (most recent call last):
  File "/home/kali/Desktop/DamareeOomar_21564419_ISEAssignment/code/test_malaysia_sri_lankaBVA.py", line 6, in testMalaysia_sri_lankaBVA
    self.assertEqual( "Northeast Monsoon" , country_name_and_year.malaysia_sri_lanka(12), "Month = 12 or month = 1 or month = 2")
AssertionError: 'Northeast Monsoon' != 'Inter-monsoon'
- Northeast Monsoon
+ Inter-monsoon
 : Month = 12 or month = 1 or month = 2

======================================================================
FAIL: testaustralia_2 (testaustralia2.Australia_2_test.testaustralia_2)
----------------------------------------------------------------------
Traceback (most recent call last):
  File "/home/kali/Desktop/DamareeOomar_21564419_ISEAssignment/code/testaustralia2.py", line 6, in testaustralia_2
    self.assertEqual( "Birak" , country_name_and_year.australia_2(1), "Month = 12 or month = 1")
AssertionError: 'Birak' != 'Summer'
- Birak
+ Summer
 : Month = 12 or month = 1

----------------------------------------------------------------------
Ran 6 tests in 0.001s

FAILED (failures=4)
```

Summary of errors;

The name of the season Djilba was wrong assigned to the name of the picture causing an error.

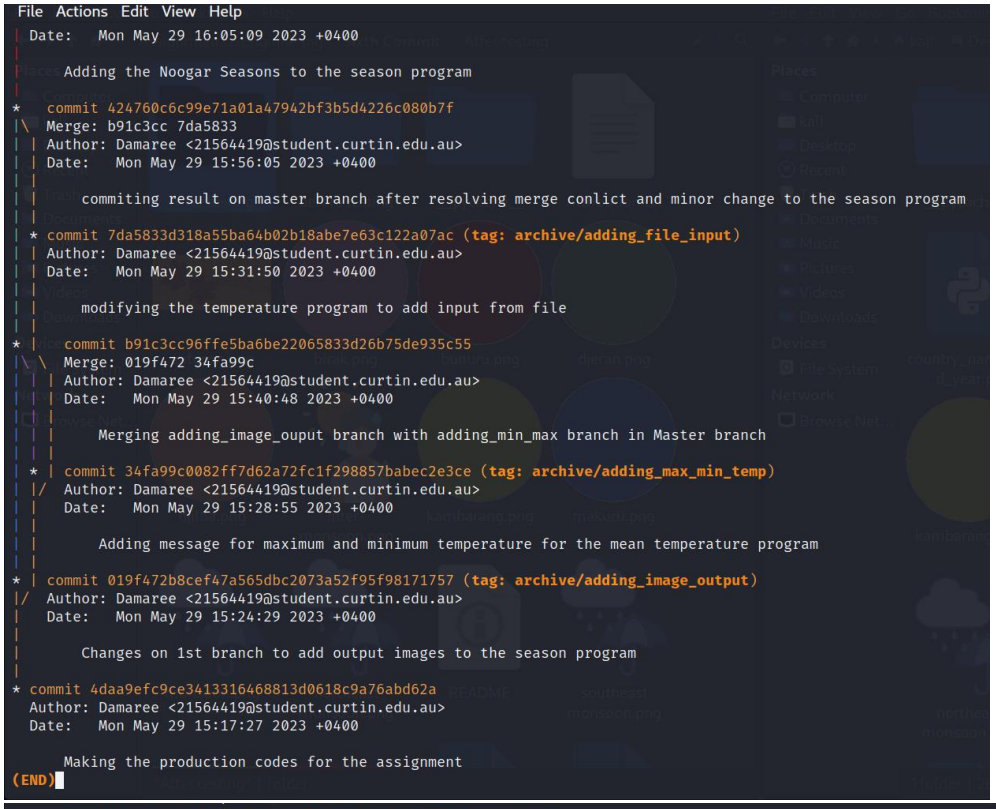
One of the limits for malaysia_sri_lanka() module were wrongly written

After correcting the errors(both with and without framework):

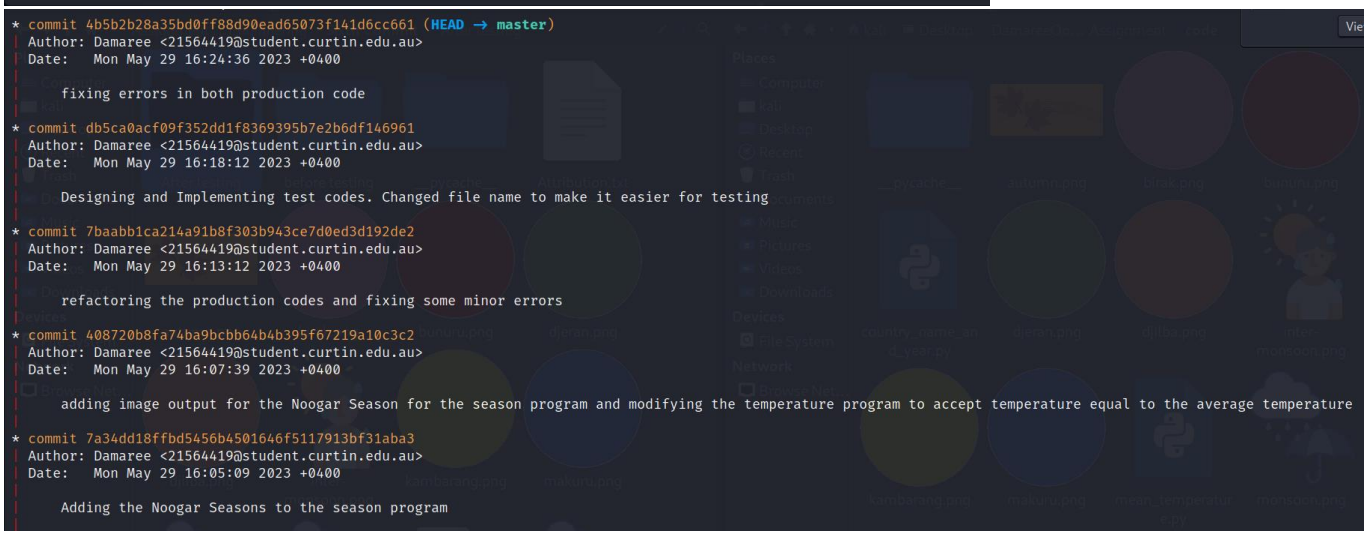


Version Control

This are only the commit before pushing to repositories



```
File  Actions  Edit  View  Help
| Date:   Mon May 29 16:05:09 2023 +0400
|
|     Adding the Noogar Seasons to the season program
|
*   commit 424760c6c99e71a01a47942bf3b5d4226c080b7f
|\  Merge: b91c3cc 7da5833
| | Author: Damaree <21564419@student.curtin.edu.au>
| | Date:   Mon May 29 15:56:05 2023 +0400
| |
| |     commiting result on master branch after resolving merge conlict and minor change to the season program
| |
| * commit 7da5833d318a55ba64b02b18abe7e63c122a07ac (tag: archive/adding_file_input)
| | Author: Damaree <21564419@student.curtin.edu.au>
| | Date:   Mon May 29 15:31:50 2023 +0400
| |
| |     modifying the temperature program to add input from file
| |
* | commit b91c3cc96ffe5ba6be22065833d26b75de935c55
|\ \  Merge: 019f472 34fa99c
| | | Author: Damaree <21564419@student.curtin.edu.au>
| | | Date:   Mon May 29 15:40:48 2023 +0400
| | |
| | |     Merging adding_image_ouput branch with adding_min_max branch in Master branch
| | |
| * | commit 34fa99c0082ff7d62a72fc1f298857babec2e3ce (tag: archive/adding_max_min_temp)
| |/  Author: Damaree <21564419@student.curtin.edu.au>
| |   Date:   Mon May 29 15:28:55 2023 +0400
| |
| |       Adding message for maximum and minimum temperature for the mean temperature program
| |
* | commit 019f472b8cef47a565dbc2073a52f95f98171757 (tag: archive/adding_image_output)
|/  Author: Damaree <21564419@student.curtin.edu.au>
|   Date:   Mon May 29 15:24:29 2023 +0400
|
|       Changes on 1st branch to add output images to the season program
|
* commit 4daa9efc9ce3413316468813d0618c9a76abd62a
  Author: Damaree <21564419@student.curtin.edu.au>
  Date:   Mon May 29 15:17:27 2023 +0400

      Making the production codes for the assignment
(END)
```



```
* commit 4b5b2b28a35bd0ff88d90ead65073f141d6cc661 (HEAD → master)
| Author: Damaree <21564419@student.curtin.edu.au>
| Date:   Mon May 29 16:24:36 2023 +0400
|
|     fixing errors in both production code
|
* commit db5ca0acf09f352dd1f8369395b7e2b6df146961
| Author: Damaree <21564419@student.curtin.edu.au>
| Date:   Mon May 29 16:18:12 2023 +0400
|
|     Designing and Implementing test codes. Changed file name to make it easier for testing
|
* commit 7baabb1ca214a91b8f303b943ce7d0ed3d192de2
| Author: Damaree <21564419@student.curtin.edu.au>
| Date:   Mon May 29 16:13:12 2023 +0400
|
|     refactoring the production codes and fixing some minor errors
|
* commit 408720b8fa74ba9bcbb64b4b395f67219a10c3c2
| Author: Damaree <21564419@student.curtin.edu.au>
| Date:   Mon May 29 16:07:39 2023 +0400
|
|     adding image output for the Noogar Season for the season program and modifying the temperature program to accept temperature equal to the average temperature
|
* commit 7a34dd18ffbd5456b4501646f5117913bf31aba3
| Author: Damaree <21564419@student.curtin.edu.au>
| Date:   Mon May 29 16:05:09 2023 +0400
|
|     Adding the Noogar Seasons to the season program
|
```

Commit	Description
First commit	Creating production code of the 2 programs
Second commit	Branch 1: Adding the Noogar seasons to the season program Branch 2: Modifying temperature program to consider max and min values of temperature. Branch 3: Modifying temperature program to accept input from file Branch 4(deleted branch): Modifying temperature program to write results to file Branch 1, branch 2 and branch 3 are merged together to the master branch Merge conflicts are then resolved and committed to the master branch
Third commit	Trying to refactor the temperature program Adding the picture output for the Noogar season
Fourth commit	Modifying the temperature program to accept mean values of temperature. Adding the picture output for Malaysia/Sri Lanka in the season program.
Fifth commit	Refactoring the season program only
Sixth commit	Designing and implementing testing programs for the temperature and season programs modules.

Ethics and Professionalism

If one day, the codes that I have designed are used in a meteorological service station of a country and a person working there intentionally input wrong data to the program, this can result to faulty results, which scientist might use in turn in their research. If their research, for instance, a device using the results from my program is developed and it is used to predict natural calamities, this can cause harm to people in the concerned area. The person might be doing this in his/her personal interest, for example, paid by the company making the devices to hide any defects.

If according to the Australian Computer Society code (ACS), the person placed the public interest before his/her personal interest, if the person was competent, honest and professional in his work and if he really cared about enhancing the quality of life of those affected by his work, he would not have done that.

Discussion

The codes are can be improved in many ways such as prevent users from inputting wrong data, making an interactive menu for the user, making the program writing the output to a file and many other features which can be implemented.