Contribution: 30%

Brief:

You are required to implement unit testing on all the functions in the provided file using pytest.

You are permitted to use your own notes however you are **not** permitted to access the Internet during this practical.

You **may not use** generative artificial intelligence (AI) (ChatGPT, CoPilot, ChatSonic, Bing Chat, Lex, DALL-E 2, or other similar tools)

Notes:

1) The purpose of this practical is to write the tests **NOT** to correct any code errors.
2) You are required to follow the good practice of using a separate test folder and also of providing only 1 test assert per unit test.
3) A function may require more than one test. The use of comments for the assert is recommended.
4) The use of parametrization and test fixtures where appropriate is expected.

Setup

Clone the project folder using

Git clone https://gitlab.comp.dkit.ie/goslingp/sys_test_2025_ca1.git

This should produce a folder named sys_test_ca1 which contains the file to be tested – **pytest_pract1.py**

All tests should be in a tests folder.

You should include an excel workbook with the test inputs and expected values calculated.

Function details and marking scheme

Feature	Function	Max Marks
Use of a tests folder	Correct test folder setup and use	5
Excel workbook	Outline the inputs and expected values for tests	5
Question 1	This function should add 2 to the argument x, if x is number, otherwise it will return -1. Rules: a) Return input plus 2 b) If NaN then return -1	10
Question2	Function to return the biggest number from three variables Rules: a) Return the value of a, b or c whichever is the biggest b) Return -1 if any number is NaN	10
Question3	Calculate the variable interest (to 2 decimal places) earned on an amount deposited for various amounts. Rules: a) Return 3% interest on amounts up to 100 b) Return 5% on amounts over 100 and less than 1000 c) Return 6.5% on amounts greater than 1000	10
Load_results	Loads result data from a txt file	5
Question4	Calculate the number of points a team has based on results read from a text file – results.txt is provided Rules: a) 3 points for a win b) b) 1 point for a draw c) c) 0 point for a game lost	15
Include a coverage report for the project	Marks provided on total coverage	10
Include a html report	Marks provided for html report	10
Include the commands / results	Record the commands you used to run the tests and screenshots of the results in a word or similar document	10
Upload complete project code	Upload ALL your files for this practical either via Moodle (zip file) A git repository with peter.gosling@dkit.ie as a team member.	5 Or 10
Total		100

Coverage report -m to get report