MODULE 1&2 Examples:

Example 1: Output the sequence 1,2,4,8,16…1024 (double the integer starting at 1 until it is equal to 1024)

1. Source code:

Text

Description automatically generated

1. Output:

Graphical user interface, text, application

Description automatically generated

Example 2: Facile sequence (1\*2…\*n) Ask user to input pos integer and output the facile sequence of until that integer is reached. Ask user to input again until they have a positive integer

1. Source Code:

Graphical user interface, text, application

Description automatically generated

1. Output:

Text

Description automatically generated

Example 3: Ask user to input 5 integers. Output the max of those numbers

1. Source Code:

Text

Description automatically generated

1. Output:

Text

Description automatically generated

Example 4: Make program that outputs all odd numbers from 0 to 100:

1. Source Code:

Text

Description automatically generated

1. Output:

Graphical user interface, text, application

Description automatically generated (AND SO ON)

Example 5: Program where it counts down from 100 down to a specified integer (in this case, 5)

1. Source code:

Text

Description automatically generated

1. Output:

Graphical user interface, text, application

Description automatically generated (AND SO ON)

Example 6: Input positive integer. Output sum 1+2…+n

1. Source code 1:

Graphical user interface, text, application

Description automatically generated

1. Output 1:

Graphical user interface, text, application

Description automatically generated

1. Source code 2:

Graphical user interface, text, application

Description automatically generated

1. Output 2:

Graphical user interface, text

Description automatically generated

Example 7: Ask user to input an integer n. If even, output the function (2 \* n + 5); if odd, output the function n^2 – n.

1. Source code:

Graphical user interface, text, application

Description automatically generated

1. Output:

Graphical user interface, text, application

Description automatically generated

Graphical user interface, text, application

Description automatically generated

Example 8: Ask user to input age. Output the ticket price corresponding to age: younger than 2 years = $0; 2 < 5 = $2; 5<10 = $4; 10+ = $5

1. Source code:

Text

Description automatically generated

1. Output:

Graphical user interface, text, application

Description automatically generated

Example 9: Ask user to input a number between 1 and 12. Print “invalid” if it does not meet the requirements and “valid” if it does.

1. Source code:

Graphical user interface, text, application

Description automatically generated

1. Output:

Graphical user interface, text, application

Description automatically generated

Example 10: assign the variables 5.0 and 8. Output the solution of num1^2 + sqrt(num2)

1. Source code:

Text

Description automatically generated

1. Output:

Graphical user interface, text, application, Word

Description automatically generated

Example 11: Ask the user to input their grade. Output “Pass” if they got 70 to 100%; “Fail” if they got 0 to 69%; “invalid” if other integer is provided

1. Source code:

Graphical user interface, text, application

Description automatically generated

1. Output:

Graphical user interface, text

Description automatically generated

Example 12: Ask the user to input characters P or p for pass or F or f for fail. If they pass output “You pass!” vise versa: “You fail!”. Output “Invalid input.” if different characters are provided

1. Source code:

Graphical user interface, text, application

Description automatically generated

1. Output:

Graphical user interface, text, application

Description automatically generated

Example 13: Ask the user to input a positive integer. Print the output of the integer. If the integer isn’t provided, ask the user to try again

1. Source code:

Graphical user interface, text, application

Description automatically generated

1. Output:

Graphical user interface, text, application

Description automatically generated

Example 14: Create a loop that counts down from ten to one

1. Source code:

Graphical user interface, text, application

Description automatically generated

1. Output:

Graphical user interface, text, application

Description automatically generated

Example 15: Ask the user to input the radius of a sphere. Output the surface area (4pi\*r^2)

1. Source code:

Graphical user interface, text, application

Description automatically generated

1. Output:

Graphical user interface, text, application

Description automatically generated

Example 16: Create a program that allows a user to input a chain of positive integers. Output the sum of the integers once the user inputs a negative number

1. Source code:

Text

Description automatically generated

1. Output:

Graphical user interface, text, application

Description automatically generated

Example 17: Create while loop that asks user to input a positive integer n and output the sum 1+2…+n

1. Source code:

Graphical user interface, text

Description automatically generated

1. Output:

Graphical user interface, text, application

Description automatically generated

Example 18: Input a user's year and month of birth, if the year is a multiple of the month (i.e. year = n\*month for some integer n), output "The year is a multiple of the month. This is a coincidence!"; otherwise, output "The year is not a multiple of the month."

1. Source code:

Graphical user interface, text, application

Description automatically generated

1. Output:

Graphical user interface, text, application

Description automatically generated

Example 19: Output the numbers of the fibonacci sequence less than 1000

1. Source code:

Graphical user interface, text, application

Description automatically generated

1. Output:

Graphical user interface, text, application

Description automatically generated with medium confidence