



# United International University (UIU)

Department of CSE

Trimester: Spring 2023

Course Name: | CSE 4510 | Operating System Laboratory (Section A)

## Submission Guideline:

- Code each problem in separate shell scripts (task1.sh, task2.sh, etc)
- Create a folder and put your shell scripts inside the folder
- Rename the folder with your 9 digit student ID (011XXXXXX).
- ZIP the folder and submit the 011XXXXXX.zip file

Please do not copy codes from others/the internet. Each of the offline assignments will be evaluated with a viva. You must be able to explain your code. Also, we will run a copy checker on the submissions. Any plagiarism will be severely penalized.

### 1. [10 marks]

Write a shell script containing the following functions:

- **sum\_of\_series()**: The function will take as input one number. It will then calculate the sum of the series consisting 1 to the given number. The sum is then stored in a variable. Return the variable from the function.
- Example - input: 5, output:  $1+2+3+4+5 = 15$

Your main shell script will take the number as input. You need to perform a validity check to ensure the inputs are valid. This can be done in the following ways:

- If the input is non-positive, print a message that the input is invalid. Then ask the user for a valid input. Repeat this until you get a valid length as input.

Your script will then make calls to the functions you defined before, and print out the resultant factorial from as follows:

The sum is: xxxx

### 2. [6 marks]

Write a shell script that takes a command line argument - the name of a file. If the file exists in the computer, then it returns the full path to the user. Else, it will create a file with the same name in the Documents directory, and then return this full path.

### 3. [4 marks]

Write a shell script that takes a command line argument, n from the user. It will then create a Fibonacci Function and find the n-th number.