National University of Computer & Emerging Sciences

AL2002 – Artificial Intelligence – Lab (Spring 2024)

BSCS-6B

Lab Work 1 (Python Basics)

Lab Instructor	Momna Javaid
Department	Computer Science

Instructions:

1. Make a word document paste your code and output there.
2. You also have to submit .py file.
3. Comments in the code explaining chunks of the code are important.
4. Plagiarism is strictly prohibited, 0 marks would be given to students who cheat.

Lab Tasks:

1. Write a program to find if the number is the factor of 5 or not. Take input value of a number from the user and then check if it is factor of 5 then print "Input number is factor of 5" otherwise print "Input number is not a factor of 5".

2. Take input (integers) from the user in a list of size 10, then determine whether each number in list is odd or even. Display output using String formatting %d (use for integers).

3. **In realms of code where circuits gleam,**

    A dance of minds, a digital dream.

    Silicon whispers, circuits hum,

    In the heart of algorithms, futures drum.

    Lines of logic weave tales untold,

    In the binary language, stories unfold.

    Bits and bytes, a cosmic art,

    Artificial minds, a symphony's start.

    Write a program to print the above poem. Print the above statements in the specified format.

4. There is a cleaning robot named "AutoCleaner". The room has the shape of a rectangle. It needs to calculate the room and wants the length, width and height of the room. Create a Calculate_area function to take the length and width of a rectangle as parameters and returns the calculated area. The Calculate_volume function takes the length, width and height as parameters and returns the calculated volume. Take the length, width and height of a rectangle from user. The program then display the area and volume of the rectangle in main function. After this, display "Cleaning Starts…".

5. Write a calculator program in Python using ADD, SUB, SQUARE, CUBE functions. Take input values of Two numbers, an Operator and call the corresponding functions to perform these tasks.