QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY NAWABSHAH
B.S. (CYBER SECURITY)

PROGRAMMING FUNDAMENTALS
Lab Experiment #04

Name: _____
Roll #: _____
Date: _____

OBJECTIVE:
Conditional statements in Python

TOOLS REQUIRED:
Personal computer with windows and Python installed

DESCRIPTION:
This lab experiment provides practice task to familiarize with the conditional statements in Python. The most common conditional structure is made with the if-else block. In such a block, the evaluation of a condition (usually formed with comparison, arithmetic, and logic operators), determines which part of the code is to be executed. Further, the if-else block can be nested to formulate more complex control flow.

LAB TASK:
1. Open Python IDLE terminal and then create a new file. Name it "lab4_1.py". Write a program that inputs a number and then determines whether the entered number is odd, even or 0

2. Create "lab4_2.py". Write a program that asks for a character to be entered by the user. Then the program checks whether the entered character is a vowel or consonant

3. Create "lab4_3.py". Write a program that asks for a person's age, employment status, marital status and then determines the insurance plan according to the following table.

Age	Employment status	Marital status	Insurance plan
< 25	any	any	Not allowed
25-40	unemployed	unmarried	1400 PKR / month
25-40	employed	unmarried	800 PKR / month
25-40	unemployed	married	1200 PKR / month
25-40	employed	married	1000 PKR / month
>40	any	any	1500 PKR / month

4. Create "lab4_4.py" and write a program that inputs users obtained marks. The program must calculate his grade according to the following rules:

<40: Fail
41-50: 'D' grade
51-60: 'C' grade
61-70: 'B' grade
71-80: 'A' grade
>81: 'A-1' grade

QUESTIONS:

Q # 1: Consider the following code: What will be the output?

```
x = 0
a = 5
b = 5
if a > 0:
    if b < 0:
        x = x + 5
    elif a > 5:
        x = x + 4
    else:
        x = x + 3
else:
    x = x + 2
print(x)
```

Ans.

Q # 2: Which one of the following is a valid Python if statement :

```
A. if a>=2:
B. if (a >= 2)
C. if (a => 22)
D. if a >= 22
```

Ans.

Q # 3: Which statement will check if a is equal to b?

```
A. if a = b:
B. if a == b:
C. if a === c:
D. if a == b
```

Ans.

Q # 4: Write the output of the following code

```
a = 25
if a > 15:
    print("Hi")
if a <= 30:
    print("Hello")
else:
    print("Good bye!")
```

Ans.