Faculty of Computing & Information Technology

CC-112L : Programming Fundamentals
BSIT Morning/Self 2024
LAB – 02

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Issue Date: Feb,18, 2024

Control Structures and Iterations
Instructions:

Allowed Time: 75 Minutes
Total Marks: 45

1. Gossips are not allowed.
2. Teacher assistants are for your help, so be nice with them. Respect them as they are teaching you. Raise your hands if you have some problem and need help from TA. Avoid calling them by raising your voice and disturbing the environment of Lab.
3. TA may deduct your marks for any kind of ill-discipline or misconduct from your side.
4. Evaluation will be considered final and you cannot debate for the marks. So, focus on performing the tasks when the time is given to you.

Question 1: [15 minutes , 10]

Write a program that asks the user for their age and determines the ticket price using the following conditions:

- If age is less than 5, the ticket is **free**.
- If age is between 5 and 17, the ticket price is **$10**.
- If age is between 18 and 60, the ticket price is **$20**.
- If age is greater than 60, the ticket is **$15**.

Sample Input:

Enter your age: 65

Sample Output:

Ticket Price: $15

Question 2: [15 minutes , 10]

Write a program that takes an integer as input and categorizes it as:

- **Negative** if the number is less than 0.
  - If it's negative and divisible by 2, print "Negative Even".
  - Otherwise, print "Negative Odd".
- **Zero** if the number is exactly 0.
- **Positive** if the number is greater than 0.
  - If it's positive and divisible by 2, print "Positive Even".
  - Otherwise, print "Positive Odd".

Sample Input:

Enter a number: -8

Sample Output:

Negative Even

Question 3: [15 minutes , 10]

Write a program that takes three integer inputs representing the sides of a triangle and determines its type:

- If all three sides are equal, print "Equilateral Triangle".
- If only two sides are equal, print "Isosceles Triangle".
- If no sides are equal, print "Scalene Triangle".
- If the given sides do not form a valid triangle, print "Invalid Triangle".

Sample Input:

Enter side1: 5
Enter side2: 5
Enter side3: 8

Sample Output:

Isosceles Triangle

Question 4: [15 minutes , 5]

Write a program that takes a number **N** and prints numbers in **reverse order** from **N to 1**.

Sample Input:

Enter a number: 5

Sample Output:

5 4 3 2 1

Question 5: [15 minutes , 10]

Write a program that takes a number **N** and prints numbers in **reverse order** from **N to 1**. However, if a number is **even**, print "Even" instead of the number.

Sample Input:

Enter a number: 5

Sample Output:

5 Even 3 Even 1