**Introduction to Computing**

**Lab-VII**

* **Draw flow charts for each task.**
* **If else Statement (Simple and Nested)**

**Question 1:**

Write a program that takes a number from user and check whether entered number is even or odd?

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| **Example 1:**  Enter a number: 5  Entered number is odd  **Example 2:**  Enter a number: 16  Entered number is even |

**Question 2:**

Write and run a program that reads two integers and then uses the conditional expression operator to print either “multiple” or “not” according to whether one of the integers is a multiple of the other.

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| **Expected output:**  Sample Input: 12 6  Output: 12 is the multiple of 6 Sample Input: 12 13  Output: NON |

**Question 3:**

Write a program that takes two numbers (a & b) and print by an appropriate message that whether **a** is greater than **b**, or **a** is less than **b** or both are equal (**Use only if statement**)

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| **Expected output:**  **Example 1**  Enter value of a: 45  Enter value of b: 5  a is greater than b  **Example 2**  Enter value of a: 4  Enter value of b: 4  a is equals to b  **Example 3**  Enter value of a: 7  Enter value of b: 72  a is smaller than b |

**Question 4:**

Write a program that takes selling and purchasing price from user. Your program should print whether user is in profit or No profit /Loss (**Use only if else statement**)

**Note:**

Result = Selling –Purchasing

If value of Result is greater than zero then its profit

If value of Result is less then or equals to zero then it’s No Profit/Loss

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| **Expected output:**  **Example 1**  Enter Selling Price: 3400  Enter Purchasing Price: 3200  No profit /Loss  **Example 2**  Enter Selling Price: 4000  Enter Purchasing Price: 2000  Profit  **Example 3**  Enter Selling Price: 2200  Enter Purchasing Price: 2200  No profit /Loss |

**Question 5:**

Write a program that takes three numbers (a, b & c) and print by an appropriate message that whether which of them is the largest (Use nested if statement)

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| **Expected output:**  **Example 1**  Enter value of a: 45  Enter value of b: 5  Enter value of c: 10  a is greater than b and c  **Example 2**  Enter value of a: 4  Enter value of b: 4  Enter value of c: 4  a, b and c are equal  **Example 3**  Enter value of a: 7  Enter value of b: 72  Enter value of c: 172  c is greater than a and b |

**Question 6:**

Write a program that takes 3 angles of triangle from user and prints whether triangle is valid or not. A triangle is only valid if sum of all angles is equals to 180

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| **Expected output:**  **Example 1**  Enter angle 1: 30  Enter angle 2: 30  Enter angle 3: 30  Invalid Triangle  **Example 2**  Enter angle 1: 30  Enter angle 2: 90  Enter angle 3: 60  Valid Triangle |

**Question 7:**

Given the length and breadth of a rectangle, write a program to find whether the area of the rectangle is greater than its perimeter. For example, the area of the rectangle with length = 5 and breadth = 4 is greater than its perimeter.

**Question 8:**

ITC has 6 sections we are required to find out which sections average is higher. Write a program which takes each section’s PF average and Output which section has won w.r.t average.

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| Sample Input:   B 90  D 80  C 60  A 99  E 91  F 80  Output: A got the highest average |

**Question 9:**

Given a point (x, y). Write a program to check point lies in which quadrant? Point can also lie in none of quadrant and is on origin if both x and y are zero. Point can lie on X or Y axis as well

1st Quadrant: x and y are positive

2nd Quadrant: x is positive and y is negative.

3rd Quadrant: x and y are negative.

4th Quadrant: x is negative and y is positive