**PLT Programs - Level 2**

**Decision Making**

1. Write a program to accept a number and display whether it is an even or odd number by using if-else statement

2. Write a program to accept a student’s name and scores in three subjects. Display the 1st, 2nd average, and total. Display whether the student has secured 1st, 2nd, pass class, or has failed.  1st class is for a score of 60 and above, 2nd class is for a score of 50 and above, while the pass class is for a score of 35 and above. If the score is less than 35, then the student fails.

3. A vendor offers software services to a client. Each resource is billed at some dollar rate per hour. The total cost of the project for the client is, therefore, the total number of hours contributed by all the vendor resources \* the dollar rate/hour.

There are however some variants.

a. The vendor might have purchased hardware/infrastructure or software licenses needed for the project.

b. The vendor might have utilized external consultants for the project.

c. The client looks at the vendor as a one-stop solution and hence external resources employed by the vendor need to be paid by the vendor.

d. It might however be possible that the vendor’s hardware and software purchases are borne by the client. In this case, the client pays the vendor 30% of the hardware/infrastructure costs. In the case of software licenses, the client pays the vendor 50% of the cost, if they are commonly available and used, or 100% if the software is infrequently used or is proprietary client technology.

e. The external consultants employed by the vendor will come at a dollar rate per hour.

f. Accept the suitable inputs and display the profits/loss realized by the vendor

Switch and While loops

4. Write a program to generate the following series.  accept N from User:

1. 4, 16, 36, 64, … N
2. 1, 2, 3, 4, 5, 6, ...N
3. 1, 4, 27, 256, 3125, ...N

5. Write a program to generate the following series.  accept N from User:

1. 1, 4, 7, 12, 23, 42, 77, … N
2. 1, 4, 9, 25, 36, 49, 81, 100, … N
3. 1, 5, 13, 29, 49, 77, … N

6. Write a program to do the following:

 a. Input: 270176 (integer)

 b. Output: Two Seven Zero One Seven Six

7. Write a program to find the reverse of a number. Store the reverse value in a different variable. Display the reverse.

8. Write a program to find the sum of all odd numbers from 1 to N. Accept N. Display the sum.

9. Write a program to find the sum of all the prime numbers in the range n to m. Display each prime number and the final sum.

10. Write a program to display the 1st, 2nd, and 4th multiple of 7 which gives the remainder 1 when divided by 2,3,4,5 and 6

11. Write a program to generate the following series. In all the following cases, accept N:

a. 1, 2, 6, 15, 31, 56 … N

b. 1, 1, 2, 3, 5, 8, 13, … N

12. Write a program to generate the following series. In all the following cases, accept N:

1. c. 1, 2, 4, 6, 7,10, 10,14… N
2. d. 1, 5, 8, 14, 27, 49, … N