INDIAN SCHOOL DARSAIT
DEPARTMENT OF ICT

Subject: Computer Science **Topic:** Python-conditional statements & Iterative Loops **Worksheet No. :** 4

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Write python programs using the following to:

IF statement:

1. Accept a number and check if it is odd or even.
2. Find divisibility of a number with another number.
3. Accept 3 numbers and print the largest number.
4. Program to print whether a given character is uppercase or lowercase.
5. Accept three angles and determine if they form a triangle or not.
6. Program to display a menu: 1. Calculate area of square 2. Calculate area of circle and perform the same.
7. To read two numbers and an arithmetic operator (+,-,*,/,%) and display the computed result.

FOR loop:

8. Program to print multiplication table of a number based on user's input.
9. Print the sum of first n natural numbers.
10. Program to generate the divisors of a number.
11. Accept a name and display every character separately.
12. Print the sum of the series, $S= 1+x+x^2+.....+x^n$
13. Print the Fibonacci series of first 20 elements
14. Display first n Mersenne numbers in the form 2^n-1 (eg: $2^1-1=1$, $2^2-1=3$…). Accept n from user.
15. Input a number and test if it is a prime number or not.
16. Find the lowest and second lowest integer from 10 numbers.
17. Print Mersenne numbers and display 'Prime' next to Mersenne Prime Numbers for 20 Mersenne numbers.

WHILE loop:

18. Calculate the factorial of a number.
19. To calculate and print the sum of even and odd integers of first n natural numbers.
20. To read an integer and print the reverse of that number.
21. Accept an integer > 1000 and reverse the number.
22. Print sum of even and odd integers of the first n natural numbers.

Nested loop:

23. To print the following patterns:

i)
```
*
* *
***
****
```

ii)
```
1
1 3
1 3 5
1 3 5 7
```

iii)
```
4321
432
43
4
```