

Assignment – 3

[Operators, Conditional Statements, Loops, Variables]

****All the questions are picked from the Internet , please don't refer internet for solutions****

1. Write a method to print the month name of a year given the month number as a parameter, return and print the month name outside the method. If the number is not between 1 and 12 print invalid input
2. Write a program to depict 4 levels of nested ifs
3. Take three numbers from the user and print the greatest number.
4. Write a Java program that reads a floating-point number and prints "zero" if the number is zero. Otherwise, print "positive" or "negative". Add "small" if the absolute value of the number is less than 1, or "large" if it exceeds 1,000,000
5. Write a Java program that keeps a number from the user and generates an integer between 1 and 7 and displays the name of the weekday
6. Write a program to determine if a year is leap year or not
Understanding/ Analysis - : Input the year: 2016
Expected Output: 2016 is a leap year
7. Write a Java program that reads in two floating-point numbers and tests whether they are the same up to three decimal places.
8. Write a Java program to find the number of days in a month.
Understanding/ Analysis -
Input a month number: 2
Input a year: 2016
Expected Output: February 2016 has 29 days
9. Write a Java program that takes the user to provide a single character from the alphabet. Print Vowel or Consonant, depending on the user input. If the user input is not a letter (between a and z or A and Z), or is a string of length > 1, print an error message
Understanding/ Analysis - : Input an alphabet: p
Expected Output: Input letter is Consonant
10. Write a program to display 'n' terms of natural numbers and their sum. Go to the editor

Understanding/ Analysis -

Input the number: n

Expected Output:

Example -

Input number:

2

The first n natural numbers are:

1

2

The Sum of Natural Number up to n terms: $1+2 = 3$

11. Write a program to display the cube of the number up to a given integer

Understanding/ Analysis -

Input number of terms: 4

Expected Output:

Number is: 1 and cube of 1 is: 1

Number is: 2 and cube of 2 is: 8

Number is: 3 and cube of 3 is: 27

Number is: 4 and cube of 4 is: 64

12. Write a program to display the multiplication table of a given integer till 20

Understanding/ Analysis -

Input the number (Table to be calculated): 5

Expected Output:

5 X 0 = 0

5 X 1 = 5

5 X 2 = 10

5 X 3 = 15

5 X 4 = 20

5 X 5 = 25.....5*20 = 100.

13. Write a program in Java to display the n terms of odd natural number and their sum.

Understanding/ Analysis -

Input number of terms is 5

Expected Output:

The odd numbers are:

1

3

5

7

9

The Sum of odd Natural Number up to 5 terms is: $1+3+5+7+9 = 25$

14. Write a program in Java to display the pattern like

right angle triangle with a number

Understanding/ Analysis -

Input number of rows: 10

Expected Output:

1

12

123

1234

12345

123456

1234567

12345678

123456789

12345678910

15. **right angle triangle with a number with a number repeating in the row**

```
1
22
333
4444
55555
666666
```

16. right angle triangle with a number with a number repeating in the row

```
1
2 3
4 5 6
7 8 9 10
```

17. Floyd's Triangle

Number of rows to be displayed – 6

```
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15
16 17 18 19 20 21
```

18. Pascal's Triangle

Input number of rows: 5

```
1
1 1
1 2 1
1 3 3 1
1 4 6 4 1
```

19. *'s triangle

```
*****
*****
****
***
**
*
```

20. Rhombus structure

Understanding/Analysis -

Input the number: 7

Expected Output:

```
1
212
32123
4321234
543212345
65432123456
7654321234567
65432123456
543212345
4321234
32123
212
1
```