Basics of Programming

- WAP to accept two numbers from user and swap them using a third variable.

- WAP to accept two numbers from user and swap them without using a third variable.

- WAP to accept number of days from user and convert it into equivalent number of years, weeks and days. Eg:- 402   1 year, 7 weeks and 2 days.

Decision Making

- WAP to accept a number from user and check whether it is even or odd.

- WAP to accept a number from user and check whether it is positive, negative or 0.

- WAP to accept three numbers from the user and find the largest of them.

- WAP to accept marks from the user and print it accordingly

>=90	A Grade
80-89	B Grade
70-79	C Grade
<70	D Grade

- WAP to accept a character from user and check whether it is upper case character, lower case character, digit or any other character.

- WAP to accept number between 1 – 7 from user and print the day week accordingly using switch case.

- WAP to accept a character from user and check whether it is vowel or not using switch case.

- WAP to accept a character from user and check whether it is vowel or not using if else.

- WAP to accept a number between 1 – 10 from user and print accordingly

1-5	Average
6-7	Good
8-9	Very Good
10	Excellent

- WAP to accept sales from the user and calculate the commission accordingly

SALES	COMMISION
>=30001	15%
22001-30000	10%
12001-22000	7%
5001-12001	5%
0-5000	0%

- WAP to accept principal and time from user and the rate of interest is as follows

  - If the principal is less than 2000 and for two or more year's rate of interest is 5%.

  - If principal is between 2000 to 6000 and for two or more years rate is 7%.

  - The principal is more than 6000 and one or more year the rate of interest is 8%.

  - On all deposits for 5 year or more rate is 10%.

  - On all deposits not covered above rate is 3%.

  Using the above criteria calculate the final amount using compound interest formula.

- WAP to accept three numbers from the user and print them in descending order.

- WAP to accept the number of calls from customer of a mobile company and calculate the bill accordingly

First 100 calls	Free
Next 100 calls	0.40Rs/call
Next 100 calls	0.80Rs/call
>300 calls	1.20Rs/call

Also add Rs 99 as monthly rental
(Same Question for electricity bill and library fine)

- WAP to accept coefficients of quadratic equation from the user and calculates it roots accordingly.
- Given a integer as a input and replace all the '0' with '5' in the integer

    Sample input:
        700
    Sample output:
        755

- Write a program that works as a simple calculator.

    1. It reads a character (ch)

    2. If ch is among '+', '-', '*', '/' or '%' it further takes two numbers (N1 and N2 as input). It then performs appropriate operation between numbers and print the number.

    3. If ch is any other character, the program should print 'Invalid operation.'

    Write code to achieve above functionality.

    Sample Input:

    *

    1

    2

    Sample Output:

    2

LOOPS

- WAP to print number from 1 – 10.
- WAP to print following series:-
    1, 4, 7, 10………… 40.
- WAP to find the sum of first 20 numbers.
- WAP to find product of first 10 numbers.
- WAP to accept a number from user and calculate it factorial.
- WAP to find the sum of following series:-

- WAP to find the sum of following series:-
    OR
    1+ 4 + 9 ………..
- WAP to find the sum of following series:-

- WAP to find the sum of following series:-
    OR
    1 + 8 + 27 + 64…………
- WAP to find the sum of following series:-

- WAP to find the sum of following series:-
    0, 3, 8, 15 …………. 99.
- WAP to find the sum of following series:-
    1, 3, 7, 15, 31 …………….
- WAP to accept number of terms from user and print Fibonacci series:-

0, 1, 1, 2, 3, 5, 8, 13,…………

- WAP to accept a number from user and check whether it is Prime or not.
- WAP to accept a number from user and check whether it is Palindrome or not.
- WAP to accept a number from user and check whether it is Armstrong or not.
  Eg:- 153 = 1*1*1 + 5*5*5 + 3*3*3

  = 153
- WAP to accept number from user and print its reverse.
- WAP to print the following Patterns:-
  - 1
    12
    123
    1234
  - 1
    22
    333
    4444
  - *
    **
    ***
    ****
  - 5
    54
    543
    5432
    54321
  - 54321
    5432
    543
    54
    5
  - 12345
    1234
    123
    12
    1
  - 12345
    2345
    345
    45
    5

- 1
  12
  123
    1234
    12345

- *
  **
  ***
  ****
   *****

-   *
  ***
  *****
  ****

  ****
  *****
  ***
  *

- WAP to accept a number from user and print it in its equivalent word.
  Eg:- 147   one four seven
- WAP that computes the following series:-
  Sum = 1.0/1 + 1.0/2 + 1.0/3 + 1.0/4 …….. + 1.0/N
- WAP to calculate and print the sum of odd numbers and the sum of even numbers for the first **n**natural numbers. The integer **n** is to be entered by the user.
- WAP to find sum of following series:-
   (1+2) + (1+2+3) + (1+2+3+4) + ………….. (1+2+3…..9).
- WAP to find sum of following series:-
  (12) + (123) + (1234) +……………. (1234……9).
- WAP to print the sum of negative numbers, sum of positive evennumbers and sum of positive odd numbers from a list of numbers (N) entered by the user. The list terminates when the user enters a zero.
- WAP to accept two numbers from the user and find there LCM and HCF (GCD).
- Generate and display the first 10 terms of the Pell series:1,2,5,12,29,70,….
  The next number of the Pell series is multiplication of a number by 2 and addition of previous number.
- WAP to accept a number from user and prints its table up to 20.
- WAP to accept a number from and print all its divisor.

- WAP to print follow series:-
  1-4, 7-10, 13-16 …………. -40.
- WAP to accept a number from user and check whether it is perfect number or not. A perfect number is 1 whose sum of it divisor is equal to the number itself.
- Take N (number in decimal format). Write a program that converts it to Binary format. Print the value.
- Take N (number in decimal format). Write a program that converts it to Octal format. Print the value.
- Take N (number in decimal format). Write a program that converts it to Hexadecimal format. Print the value.

STRING (LIBRARY CLASSES)

- WAP to accept a string from user and count the number of vowels in the string.
- WAP to accept string from user and count the number of spaces in the string.
- WAP to accept string from user and toggle its case.
- WAP to accept a string from user and print it in following Patterns
  E.g:- if user enter "BLUEJ"

       Output should be B
                        BL
                        BLU
                        BLUE
                        BLUEJ
- WAP to accept string from user and count the number of words in the string.
- WAP to accept a string from user and check whether it is Palindrome or not.
- WAP to accept a string and a word from user and count the number of times the word occurs in the string.
- WAP to accept a string from user and count the number of vowels in the string.
- Remove all white spaces from String.
- WAP to accept a string from user and print it in following pattern :

                  e.g Input – INDIA
                  Output-
                  I
                  N N
                  D D D
                  I I I I
                  A A A A A

ARRAYS

- WAP to accept a list of marks from user and print marks of those who scored more than 75.
- WAP to accept sales of one week of a salesman and calculate the total sale of week and the average sale per day.
- Given a list of 10 numbers.

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

  WAP to accept a number from user and search it in the given list. If the number is found prints its position the list otherwise print not found. (Linear Search)
- WAP to accept a number from user and search it in the given list using binary search.

  2, 3, 5, 10, 12, 16, 20, 23, 25, 32.
- Given a list of 10 numbers.

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

  WAP to arrange them in ascending order using selection sort technique.

  (Also for descending order)
- Given a list of 10 numbers.

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

  WAP to arrange them in ascending order using bubble sort technique.

  (Also for descending order)
- WAP to find the smallest and the largest number in the list.

  7, 9, 6, 10, 2, 1, 3, 5, 8, 4
- Given a 33 matrix 123

  456

  789

  And another 33 matrix 111

  222

  333

  WAP to find the sum of these matrixes.

  (Also difference of matrixes)
- Given a 33 matrix 123

  456

  789

  WAP to print the upper half of the matrix i.e. 123

  56

  9

  (Also lower half and   and)

- Given a 33 matrix 123
                    456
                    789

WAP to find the sum of both the diagonals of the matrixes.
- WAP to check whether two arrays entered by the user are identical or not.
- Write a Java program to cyclically rotate a given array clockwise by one.
  Sample Input-10,20,30,40
  Sample Output-40,10,20,30

FUNCTION

- Write a function that takes two **char** arguments and returns 0 if both the arguments are equal. The function returns -1 if the first argument is smaller than the second and 1 if the second argument is smaller than the first.
- Write a complete program that invokes a function **satis ( )** to find whether four integers a, b, c, d sent to **satis ( )** satisfy the equation or not. The function **satis ( )** returns 0 if the above equation is satisfied with the given four numbers otherwise it returns -1.
- WAP user a function **power ( )** to raise a number **m** to power **n** the function takes **int**values for **m** and **n** and returns the result correctly. Use a default value of 2 for **n** to make the function calculate squares when this argument is o   mitted. Write a **main ( )** to get the value of **m** and **n** to display the calculated result.
- WAP to define a function area which is capable of calculating area of a circle, rectangle and triangle.
- Write a Java method to check whether a string is a valid password.
  Password rules:
      1. A password must have at least eight characters.
      2. A password consists of only letters and digits.
      3. A password must contain at least two digits.
  Input a password (You are agreeing to the above Terms and Conditions.): abcd1234
  Password is valid: abcd1234

CONSTRUCTOR

- Design a class to represent a bank account Include the following members:-
  Data members.
      -
      - Name of the depositor
      - Account number
      - Type of account
      - Balance amount in the account
  Methods

- To assign initial values
- To deposit an amount
- To withdraw an amount after checking balance
- Do write proper constructor function

- Define a class Cricketer-
  With members Name and Country
  · A default constructor
  · Two parameterized constructor
  Cricketer(String Name,String Country)
  Cricketer(Cricketer ct)
  · toStr() method to display result as – "name belongs to country"
  EX- Virat Kohli belongs to India.