**A)**

import java.util.Scanner;

public class acad {

public static void main(String args[]) {

StringBuffer sb = new StringBuffer(); //initiate buffer to store even values

StringBuffer sb1 = new StringBuffer();//initiate buffer to store odd values

Scanner sc =new Scanner(System.in); //scan input from user

int a = sc.nextInt(); //declare variable and scan value from user

int b =sc.nextInt(); //declare variable and scan value from user

for (int i = a; i <=b; i++) { // run loop within range of input

if(i%2==0) //check if number is even

{ sb.append(i); sb.append(" "); //store in buffer sb }

else { sb1.append(i); sb1.append(" "); //if odd store in buffer sb1 } }

System.out.println("The even number are"); //print values in buffer sb System.out.println(sb.toString()); System.out.println("The odd number are"); //print values in buffer sb2 System.out.println(sb1.toString()); }

}

**B)**

import java.util.Scanner;

public class acad {

public static void main(String args[]) {

Scanner sc= new Scanner(System.in); // to scan input from user

System.out.println("Input"); //print input

int no = sc.nextInt(); //scan value from user to print multiples

System.out.println("Output");

for (int i = 1; i <=10; i++)

{ System.out.println(no+"x"+i+"="+i\*no); //print 10 multiples of no

}

}

}

**C)**

Method Overloading- If a class has multiple methods having same name but different in parameters, it is known as Method Overloading. it can be done be achieved by either changing data type or changing number of argument. Lets see by exanple

Changing data type- here method named sum is used to perform addition of int type as well as string type of inputs. method performs the same action without errors

import java.util.Scanner; public class acad2 { public static void sum(int a , int b) //create method sum sum two int { System.out.println(a+b);

} public static void sum(String s ,String s1) //another method named sum for string { String s4 = s+s1; System.out.println(s4); }

public static void main(String args[]) { Scanner sc= new Scanner(System.in);

int a = sc.nextInt(); //scan input a as int

int b = sc.nextInt(); //scan input b as int

String st = sc.next(); //scan input st as string

String st1 = sc.next(); //scam input st1 as string

sum(a,b);//sum with integer type as input

sum(st,st1);// sum with String type as input

}

} 2.by changing number of arguments-here we passed two arguments to perform then changed it to three, the method run without errors.

import java.util.Scanner; class acad2{

static int add(int a,int b){return a+b;} //pass two arguments to operate on..case1

static int add(int a,int b,int c){return a+b+c;}//change no. of arguments passed..case1

public static void main(String[] args){

System.out.println(acad2.add(11,15)); //print sum for case1

System.out.println(acad2.add(11,15,19)); //print sum for case2 }}