1. **With an example explain:**
   1. Default constructor

A default constructor is a constructor that either has no parameters, or if it has parameters, all the parameters have default values.

public class MyClass{

MyClass(){

}

public static void main(String[] args){

MyClass obj = new MyClass();

}

* 1. Parametrized constructor

The parameterized constructors are the constructors having a specific number of arguments to be passed. The purpose of a parameterized constructor is to assign user-wanted specific values to the instance variables of different objects.

public class MyClass{

int studentAge;

Subash(, int age){

studentAge = age;

}

void display(){

System.out.println(studentAge);

}

public static void main(String args[]){

MyClass Obj = new MyClass( 19);

Obj.display();

}

}

1. Write a program to count number of objects created?

class Students{

public String name;

String name;

int age;

int numberofobjects=0;

Students (String name, int age){

this.name= name;

this.age= age;

numberofobjects++;

}

}

public static void main(String[] args){

Students student1= new Students("Michelle", 7);

Students student2= new Students("Daniel", 8);

Students student3= new Students("Vanessa", 9);

Students student4= new Students("Ryan", 8);

System.out.println ("There are " + Students.numberofobjects + " objects in this class");

}

1. Write a java program to check whether the given number is palindrome or not.

public class Palindrome{

public static void main (String [] args){

Scanner find = new Scanner(System.in);

System.out.println("enter the number");

int num = find.nextInt();

int sum =0,r , number = num;

while(num>0){

r= num%10;

num = num/10;

sum = sum\*10+r;

}

if(sum == number){

System.out.println("palindrome number");

}

else{

System.out.print("not a palindrome");

}

}

}

1. Based on the output below, write a complete java program that prompts the user to enter the numbers. Use array to store these numbers and find:

a) Smallest number in the array

b) Sort the array elements in descending order.

import java.util.Scanner;

public class SmallestNum {

public static void main(String[] args) {

int temp=0;

Scanner input= new Scanner(System.in);

System.out.println("How many number to enter");

int a= input.nextInt();

int[] number = new int[a];

System.out.println("Please enter the"+a+ "numbers:");

for ( int i = 0 ; i<a; i++){

number[i]= input.nextInt();

}

for (int i = 0 ; i<a;i++){

for (int j = i+1; j<a; j++){

if(number[i]<number[j]){

temp= number[i];

number[i]=number[j];

number[j]=temp;

}

}

}

System.out.println("The smallest number you entered is:"+ number[a-1]);

System.out.println("The sorted array values are:");

for ( int i = 0 ; i<a; i++){

System.out.println(number[i] + "\t");

}

}

}