

MEGHNAD SAHA INSTITUTE OF TECHNOLOGY

*Techno Complex,. Madurdaha,Beside NRI Complex, Post-Uchhepota, Kolkata 700 150*

“LIST OF ASSIGNMENT/EXPERIMENT SUBMISSION DETAILS”

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| --- | --- | --- | --- | --- | --- |
| **SL.**  **NO.** | **ASSIGNMENT / EXPERIMENT NAME** | **DATE OF EXPERIMENT** | **DATE OF SUBMISION** | **CHECKED BY** | **REMARKS (ANY DEVIATION REGARDING SUBMISSION DATES, CONTENT, FORMAT, ETC)** |
| 1. | Describe Static keyword using example. | 10/03/2025 | 17/03/2025 |  |  |
| 2. | Create a Bank Account class and apply different functions. | 10/03/2025 | 17/03/2025 |  |  |
| 3. | Create a Joint Bank Account class. | 10/03/2025 | 17/03/2025 |  |  |
| 4. | Create a variable size Stack using user input. | 10/03/2025 | 17/03/2025 |  |  |
| 5. | Write a Java program to show the use of Private keyword. | 10/03/2025 | 17/03/2025 |  |  |
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| OBSERVATIONS / COMMENTS ON THE OVERALL PERFORMANCE: |

Signature in full with date Signature in full with date

**Faculty / Technical Assistant Lab Examiner**

**Q.1. Describe Static keyword using a proper example.**

**Code:**

class StaticDemo

{

    static int a=3;

    static int b;

    static void meth(int x)

    {

        System.out.println("x: "+x);

        System.out.println("a: "+a);

        System.out.println("b: "+b);

    }

    static

    {

        System.out.println("Static block initialized");

        b=a\*4;

    }

    public static void main(String args[])

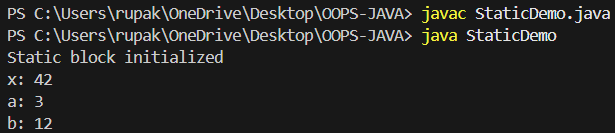
    {

        meth(42);

    }

}

**Output:**



**Q.2.Use a class bank account that contains - AC holder name, amount deposited, amount withdrawal, balance. Create a Static variable that'll count the total no of accounts created, getcount() function will display the total count. (The function should be Static also).**

**Code:**

class Account

{

    String name;

    double balance;

    static int count = 0;

    static int getCount()

    {

        return count;

    }

    Account(String n, double b)

    {

        name = n;

        balance = b;

        count++;

        System.out.println("The account is created! " + name + " with balance: " + balance);

    }

    void deposit(double deposit)

    {

        balance += deposit;

        System.out.println(name + " deposited " + deposit + ". New balance: " + balance);

    }

    void withdraw(double amt)

    {

        if (amt < 1000)

        {

            System.out.println("Amount can't be withdrawn. Minimum withdrawal is 1000.");

        } else if (amt > balance) {

            System.out.println("Insufficient balance!");

        } else {

            balance-=amt;

            System.out.println(name + " withdrew " + amt + ". New balance: " + balance);

        }

    }

    void display()

    {

        System.out.println("Account holder: " + name + ", Balance: " + balance);

    }

}

class AccDemo

{

    public static void main(String args[])

    {

        System.out.println();

        Account a1 = new Account("Rain", 10000);

        a1.withdraw(1000);

        System.out.println();

        a1.display();

        a1.deposit(2000);

        System.out.println();

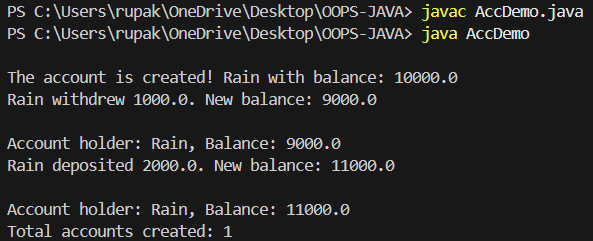
        a1.display();

        System.out.println("Total accounts created: " + Account.getCount());

    }

}

**Output:**



**Q.3.Use a class bank account that contains - AC holder name, amount deposited, amount withdrawal, balance. Create a Static variable that'll count the total no of accounts created, getcount() function will display the total count. (The function should be Static also).**

**Code:**

public class Coacc

{

    String name;

    double balance;

    static int count=0;

    static int actual\_balance=0;

    static int getcount()

    {

        return count;

    }

    static double getbalance()

    {

        return actual\_balance;

    }

    Coacc(String n,double b)

    {

        name=n;

        balance=b;

        count++;

        actual\_balance+=balance;

        System.out.println("Account created with name "+name+" and balance of joint account is "+balance);

    }

    void deposit(double d)

    {

        balance=balance+d;

        System.out.println("\nDeposited "+d+" by "+name);

        actual\_balance+=d;

    }

    void withdraw(double w)

    {

        if(w>balance)

        {

            System.out.println("\nAmount cant be withdrawn as it exceeds the balance");

        }

        else if(balance-w<1000)

        {

            System.out.println("Minimum balance of 1000 required");

        }

        else

        {

            balance=balance-w;

            actual\_balance-=w;

            System.out.println("updated balance after withdrawn of "+w+" is "+actual\_balance+" by "+name+"\n");

        }

    }

    void display()

    {

        System.out.println("\nNew balance\n");

        System.out.println("Name:- "+name+"\npersonal Balance:- "+balance);

    }

    public static void main(String[] args)

    {

        Coacc obj1 = new Coacc("R",2000);

        Coacc obj2 = new Coacc("S",3000);

        System.out.println("Total Balance is "+getbalance());

        obj1.deposit(1000);

        obj2.deposit(2000);

        System.out.println("Total Balance is "+getbalance());

        obj1.withdraw(300);

        //obj1.display();

        obj2.withdraw(700);

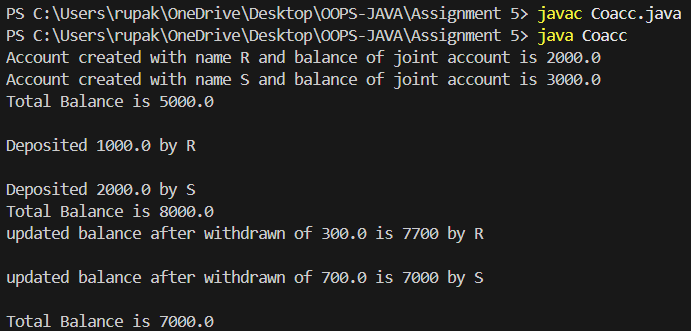
        //obj2.display();

        System.out.println("Total Balance is "+getbalance());

    }

}

**Output:**



**Q.4. Create a variable size Stack (Size is user input).**

**Code:**

import java.util.Scanner;

class Stack2 {

    private int[] stack;

    private int top = -1;

    public Stack2(int size) {

        stack = new int[size];

    }

    public void push(int value) {

        if (top == stack.length - 1)

            System.out.println("Stack Overflow!");

        else

            stack[++top] = value;

    }

    public void pop() {

        if (top == -1)

            System.out.println("Stack Underflow!");

        else

            System.out.println("Popped: " + stack[top--]);

    }

    public void display() {

        if (top == -1)

            System.out.println("Stack is empty.");

        else

            for (int i = top; i >= 0; i--) System.out.println(stack[i]);

    }

    public static void main(String[] args) {

        Scanner sc = new Scanner(System.in);

        System.out.print("Enter stack size: ");

        Stack2 stack = new Stack2(sc.nextInt());

        stack.push(10);

        stack.push(20);

        stack.display();

        stack.pop();

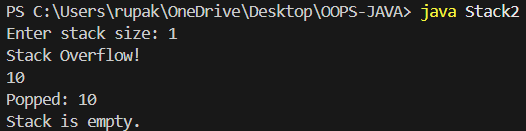
        stack.display();

        sc.close();

    }

}

**Output:**



**Q.4. Write a java program and show the use of Private keyword.**

**Code:**

class A

{

    int i,j;

    private int k;

    void getijk(int a, int b, int c)

    {

        i=a;

        j=b;

        k=c;

    }

    void display()

    {

        System.out.print(i+j+k);

    }

}

class B extends A

{

    int m;

    void getm(int n)

    {

        m=n;

    }

    void showm()

    {

        System.out.print(m);

    }

    void add()

    {

        int z=i+j+k+m;

        System.out.println(z);

    }

}

class Ademo

{

    public static void main(String args[])

    {

        A a1=new A();

        a1.getijk(5,6,7);

        a1.display();

        B b1=new B();

        b1.getm(8);

        b1.showm();

        b1.add();

    }

}

**Output:**

