

Name: Hitendra Sisodia
Sap id: 500091910

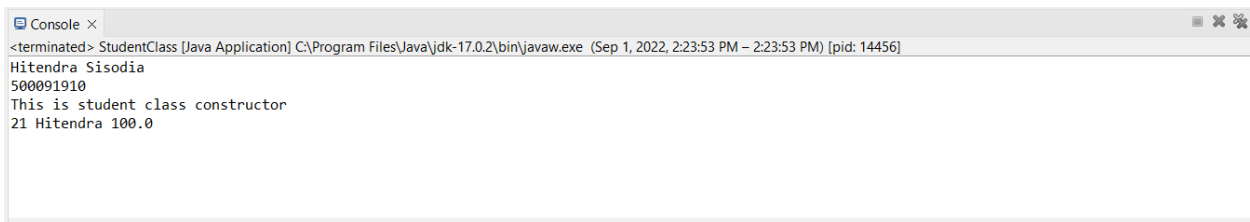
Lab 4

Ques1: Write a JAVA program to implement class mechanism. - Create a class (Student), define data members (Roll_no, name, marks), constructor, methods (setData(args), getData()) and invoke them inside main method.

Source Code

```
package Lab4;
class Student
{
    int rollno;
    String name;
    float marks;
    Student(){
        System.out.println("This is student class constructor");
    }
    void setData(int r,String n,float m) {
        this.rollno = r;
        this.name = n;
        this.marks = m;
    }
    int getrollno() {
        return this.rollno;
    }
    String getName() {
        return this.name;
    }
    float getmarks() {
        return this.marks;
    }
}
public class StudentClass {
    public static void main(String args[]) {
        System.out.println("Hitendra Sisodia");
        System.out.println("500091910");
        Student s1 = new Student();
        s1.setData(21,"Hitendra",100.0f);
        System.out.print(s1.getrollno()+" ");
        System.out.print(s1.getName()+" ");
        System.out.println(s1.getmarks());
    }
}
```

Output



```
Console x
<terminated> StudentClass [Java Application] C:\Program Files\Java\jdk-17.0.2\bin\javaw.exe (Sep 1, 2022, 2:23:53 PM - 2:23:53 PM) [pid: 14456]
Hitendra Sisodia
500091910
This is student class constructor
21 Hitendra 100.0
```

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Ques2: Write a program in JAVA to show the use of 'this' keyword when parameters and instance variables are the same.

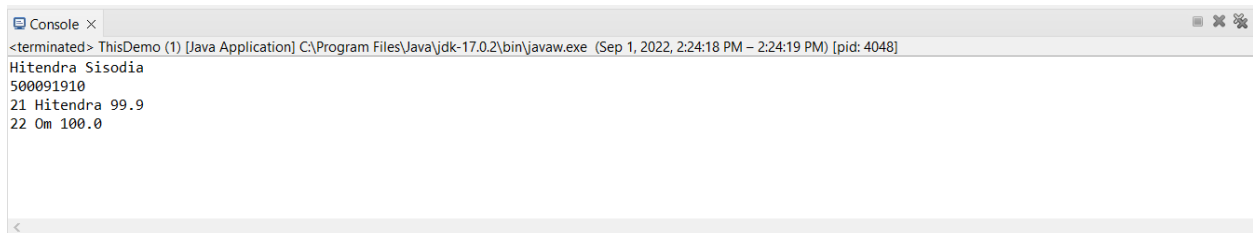
Source Code

```
package Lab4;

class Student1
{
    int rollno;
    String name;
    float marks;
    Student1(int rollno,String name,float marks){
        //this keyword used to make sense between class instance and function
        arguments.
        this.rollno = rollno;
        this.name= name;
        this.marks = marks;
    }
    void display() {
        System.out.println(rollno+" "+name+" "+marks);
    }
}

public class ThisDemo {
    public static void main(String args[]) {
        System.out.println("Hitendra Sisodia");
        System.out.println("500091910");
        Student1 s1 = new Student1(21,"Hitendra",99.9f);
        Student1 s2 = new Student1(22,"Om",100f);
        s1.display();
        s2.display();
    }
}
```

Output

A screenshot of a Java console window titled 'Console x'. The window shows the output of a Java application. The first line is '<terminated> ThisDemo (1) [Java Application] C:\Program Files\Java\jdk-17.0.2\bin\javaw.exe (Sep 1, 2022, 2:24:18 PM - 2:24:19 PM) [pid: 4048]'. The subsequent lines are the output of the program: 'Hitendra Sisodia', '500091910', '21 Hitendra 99.9', and '22 Om 100.0'. The console window has a standard Windows-style title bar and a scrollbar on the right side.

```
<terminated> ThisDemo (1) [Java Application] C:\Program Files\Java\jdk-17.0.2\bin\javaw.exe (Sep 1, 2022, 2:24:18 PM - 2:24:19 PM) [pid: 4048]
Hitendra Sisodia
500091910
21 Hitendra 99.9
22 Om 100.0
```

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Lab 4

Ques3: Write a program in JAVA to implement constructor chaining. The program should enable creation of objects with three arguments (Roll_no, name, marks) and four arguments (Roll_no, name, marks, fee).

Source Code

```
package Lab4;
class Student2
{
    int Roll_no;
    String name;
    float marks;
    float fee;
    // constructor 1
    Student2(int Roll_no,String name,float marks){
        this.Roll_no = Roll_no;
        this.name = name;
        this.marks = marks;
    }
    // constructor 2
    Student2(int Roll_no,String name,float marks,float fee){
        this(Roll_no,name,marks);
        this.fee = fee;
    }
    void display() {
        System.out.println(Roll_no+" "+name+" "+marks+" "+fee);
    }
}
public class ConstructorChaining {
    public static void main(String args[]) {
        System.out.println("Hitendra Sisodia");
        System.out.println("500091910");
        Student2 s1 = new Student2(21,"Hitendra",99f,10000f);
        Student2 s2 = new Student2(22,"Om",100f);
        s1.display();
        s2.display();
    }
}
```

Output

```
Console x
<terminated> ConstructorChaining [Java Application] C:\Program Files\Java\jdk-17.0.2\bin\javaw.exe (Sep 1, 2022, 2:21:40 PM - 2:21:40 PM) [pid: 3032]
Hitendra Sisodia
500091910
21 Hitendra 99.0 10000.0
22 Om 100.0 0.0
```