



# **SAVITRIBAI PHULE PUNE UNIVERSITY**

**T. Y. B. B. A. (C.A.) SEMESTER - V  
(CBCS 2019 PATTERN)**

## **PRACTICAL SLIP**

**NAME : LALIT DEVIDAS PATIL**

**COLLEGE NAME: SINHGAD COLLEGE OF ARTS &  
COMMERCE WARJE PUNE-58**

**ROLL NO : 106      DIVISION:B      SEAT NO:**

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**ACADEMIC YEAR : 2024-25**

# ***Certificate***

This is to certify that  
**Mr. PATIL LALIT DEVIDAS**

**Seat Number\_\_\_\_\_of T.Y.BBA(CA) Sem - V has  
Successfully completed Laboratory course  
(Core Java) in the Year . He has scored mark out of  
10 (For Lab Book).**

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**Subject Teacher**

**H.O.D./Coordinator**

**Internal Examiner**

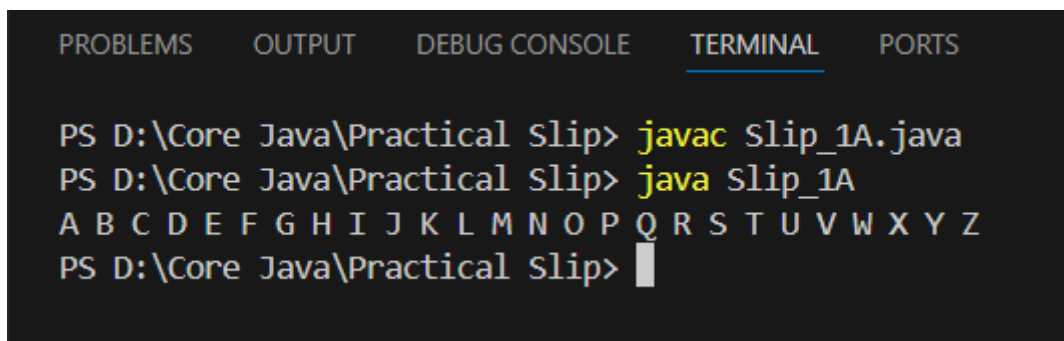
**External Examiner**

## Slip 1

A) Write a 'java' program to display characters from 'A' to 'Z'.

```
public class Slip_1A {  
    public static void main(String[] args) {  
  
        for (char letter = 'A'; letter <= 'Z'; letter++) {  
            System.out.print(letter + " ");  
        }  
    }  
}
```

## Output



```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS  
  
PS D:\Core Java\Practical Slip> javac Slip_1A.java  
PS D:\Core Java\Practical Slip> java Slip_1A  
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z  
PS D:\Core Java\Practical Slip> 
```

B) Write a 'java' program to copy only non-numeric data from one file to another file.

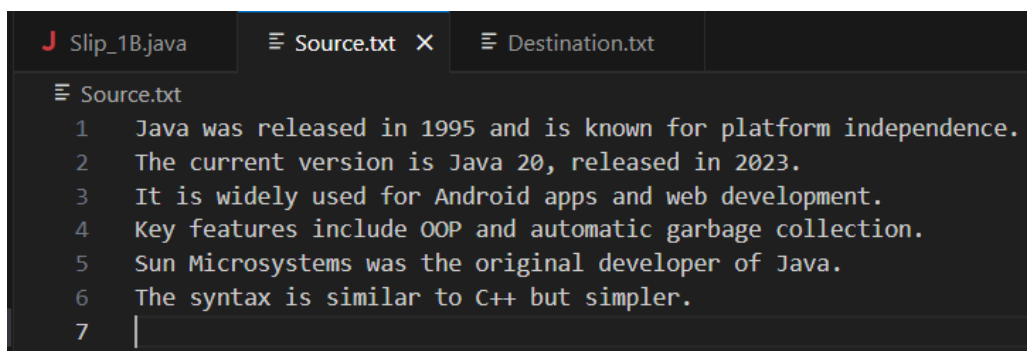
```
import java.io.*;  
public class Slip_1B {  
    public static void main(String[] args) {  
        String sourceFile = "Source.txt";  
        String destinationFile = "Destination.txt";  
        try {  
            FileReader reader = new FileReader(sourceFile);  
            FileWriter writer = new FileWriter(destinationFile);  
            int character;  
            while ((character = reader.read()) != -1) {  
                if (!Character.isDigit(character)) {  
                    writer.write(character);  
                }  
            }  
        }  
    }  
}
```

```

        reader.close();
        writer.close();
        System.out.println("Non-numeric data copied successfully!");
    } catch (IOException e) {
        System.out.println("An error occurred: " + e.getMessage());
    }
}
}

```

## Source.txt



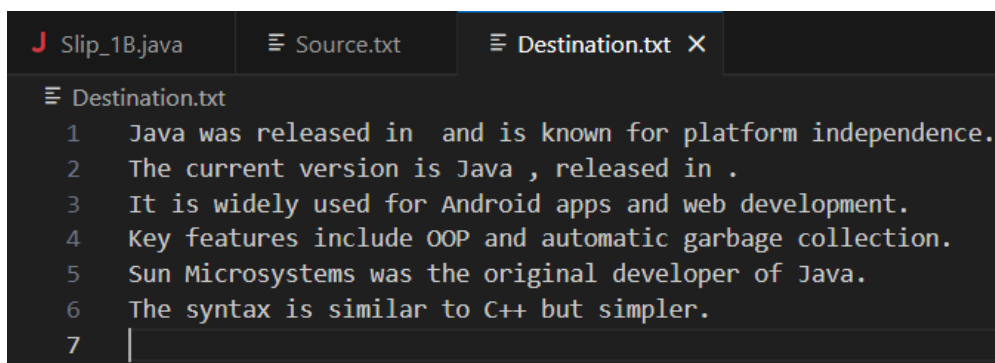
The screenshot shows an IDE window with three tabs: 'Slip\_1B.java', 'Source.txt', and 'Destination.txt'. The 'Source.txt' tab is active, displaying the following text:

```

1  Java was released in 1995 and is known for platform independence.
2  The current version is Java 20, released in 2023.
3  It is widely used for Android apps and web development.
4  Key features include OOP and automatic garbage collection.
5  Sun Microsystems was the original developer of Java.
6  The syntax is similar to C++ but simpler.
7

```

## Destination.txt



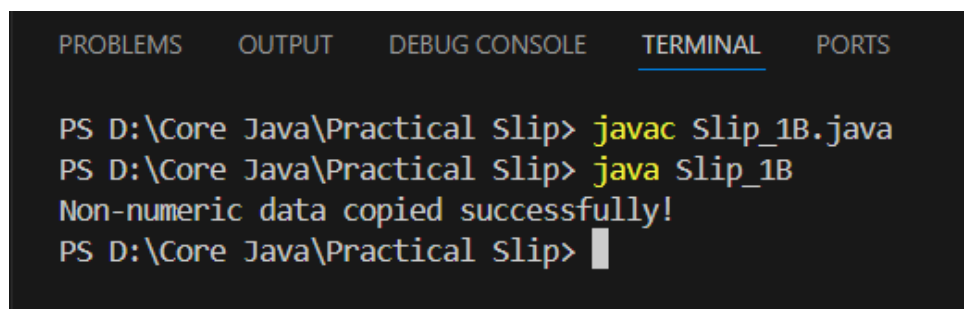
The screenshot shows the same IDE window with the 'Destination.txt' tab active. The content is as follows:

```

1  Java was released in  and is known for platform independence.
2  The current version is Java , released in .
3  It is widely used for Android apps and web development.
4  Key features include OOP and automatic garbage collection.
5  Sun Microsystems was the original developer of Java.
6  The syntax is similar to C++ but simpler.
7

```

## Output



The screenshot shows the 'TERMINAL' tab of the IDE. The following commands and output are visible:

```

PS D:\Core Java\Practical Slip> javac Slip_1B.java
PS D:\Core Java\Practical Slip> java Slip_1B
Non-numeric data copied successfully!
PS D:\Core Java\Practical Slip>

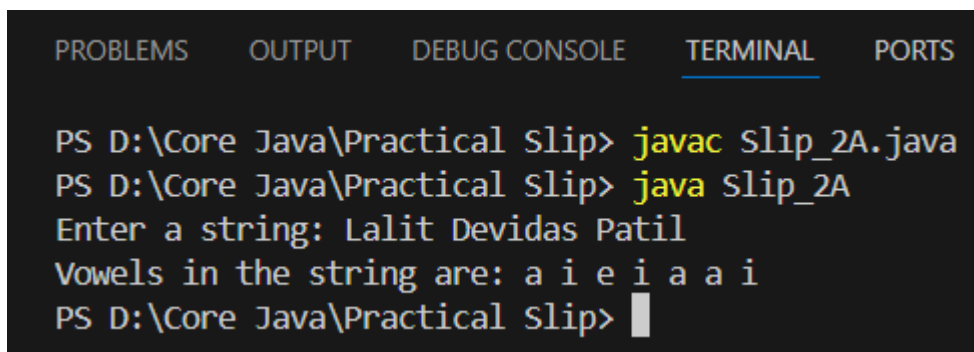
```

## Slip 2

A) Write a java program to display all the vowels from a given string.

```
import java.util.Scanner;
public class Slip_2A {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter a string: ");
        String input = scanner.nextLine();
        input = input.toLowerCase();
        System.out.print("Vowels in the string are: ");
        for (int i = 0; i < input.length(); i++) {
            char ch = input.charAt(i);
            if (ch == 'a' || ch == 'e' || ch == 'i' || ch == 'o' || ch ==
'u') {
                System.out.print(ch + " ");
            }
        }
        scanner.close();
    }
}
```

## Output



```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

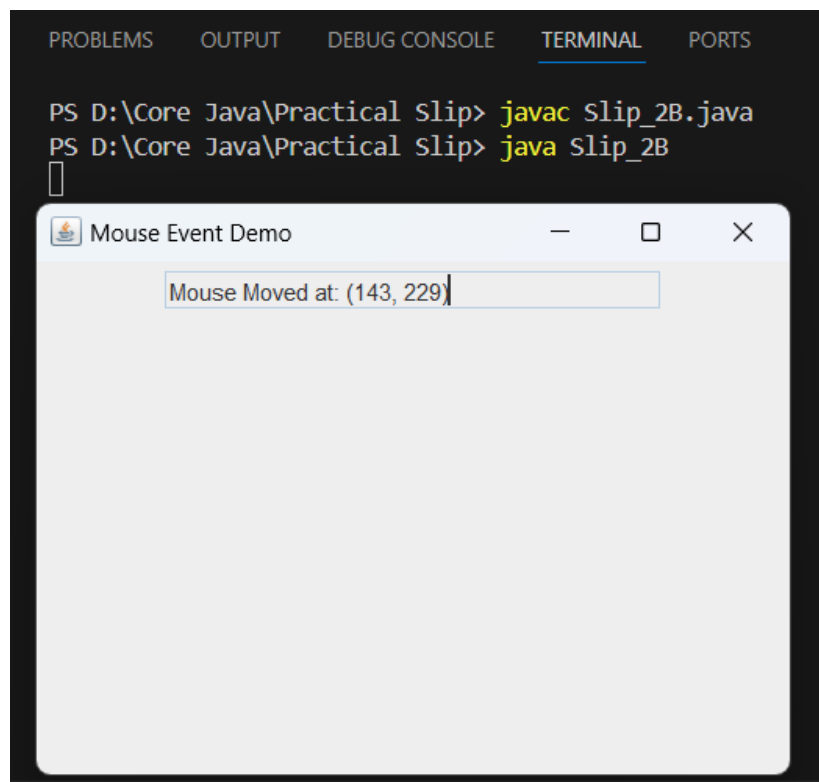
PS D:\Core Java\Practical Slip> javac Slip_2A.java
PS D:\Core Java\Practical Slip> java Slip_2A
Enter a string: Lalit Devidas Patil
Vowels in the string are: a i e i a a i
PS D:\Core Java\Practical Slip> 
```

**B) Design a screen in Java to handle the Mouse Events such as MOUSE\_MOVED and MOUSE\_CLICK and display the position of the Mouse\_Click in a TextField.**

```
import javax.swing.*;
import java.awt.*;
import java.awt.event.*;
public class Slip_2B extends JFrame implements MouseListener,
MouseMotionListener {
    private JTextField textField;
    public Slip_2B() {
        setTitle("Mouse Event Demo");
        setSize(400, 300);
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        setLayout(new FlowLayout());
        textField = new JTextField(25);
        textField.setEditable(false);
        add(textField);
        addMouseListener(this);
        addMouseMotionListener(this);
        setVisible(true);
    }
    @Override
    public void mouseClicked(MouseEvent e) {
        textField.setText("Mouse Clicked at: (" + e.getX() + ", " +
e.getY() + ")");
    }
    @Override
    public void mouseMoved(MouseEvent e) {
        textField.setText("Mouse Moved at: (" + e.getX() + ", " +
e.getY() + ")");
    }
    @Override
    public void mousePressed(MouseEvent e) {}
    @Override
    public void mouseReleased(MouseEvent e) {}
    @Override
    public void mouseEntered(MouseEvent e) {}
    @Override
```

```
public void mouseExited(MouseEvent e) {}  
@Override  
public void mouseDragged(MouseEvent e) {}  
public static void main(String[] args) {  
    new Slip_2B();  
}  
}
```

## Output

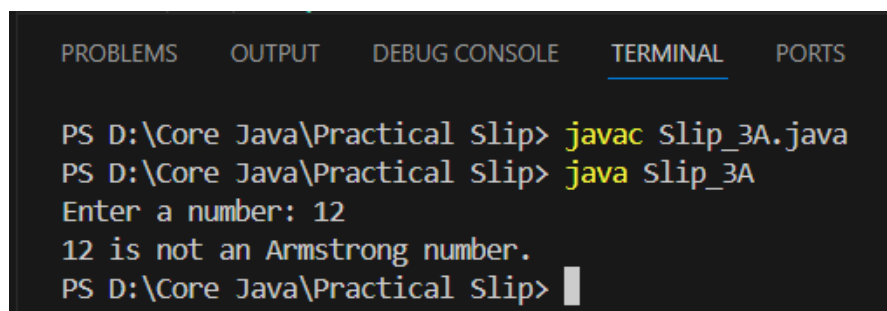


### Slip 3

A) Write a 'java' program to check whether given number is Armstrong or not. (Use static keyword)

```
import java.util.Scanner;
public class Slip_3A {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter a number: ");
        int number = scanner.nextInt();
        if (isArmstrong(number)) {
            System.out.println(number + " is an Armstrong number.");
        } else {
            System.out.println(number + " is not an Armstrong
number.");
        }
        scanner.close();
    }
    public static boolean isArmstrong(int num) {
        int originalNumber = num;
        int sum = 0;
        int length = String.valueOf(num).length();
        while (num != 0) {
            int digit = num % 10;
            sum += Math.pow(digit, length);
            num /= 10;
        }
        return sum == originalNumber;
    }
}
```

### Output



```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS D:\Core Java\Practical Slip> javac Slip_3A.java
PS D:\Core Java\Practical Slip> java Slip_3A
Enter a number: 12
12 is not an Armstrong number.
PS D:\Core Java\Practical Slip> |
```



**B) Define an abstract class Shape with abstract methods area () and volume (). Derive abstract class Shape into two classes Cone and Cylinder. Write a java Program to calculate area and volume of Cone and Cylinder.(Use Super Keyword.).**

```
import java.util.Scanner;
abstract class Shape{
    int a,b;
    Shape(int x, int y){
        a = x;
        b = y;
    }
    abstract double area();
    abstract double volume();
}
class Cone extends Shape{
    Cone(int x, int y){
        super(x,y);
    }
    double area(){
        return (a*b*3.14);
    }
    double volume(){
        return (3.14*a*a*b);
    }
}
class Cylinder extends Shape{
    Cylinder(int x, int y){
        super(x,y);
    }
    double area(){
        return (2*3.14*a*b*3.14*a*b);
    }
    double volume(){
        return (3.14*a*a*b);
    }
}
```

```

class Slip3B{
    public static void main(String args[]) throws Exception{
        int r,h,s;
        Scanner scan = new Scanner(System.in);
        System.out.println("Enter Radius, Height and Side Values : ");
        r = scan.nextInt();
        h = scan.nextInt();
        s = scan.nextInt();
        Shape s1;
        Cone c1 = new Cone(r,s);
        s1=c1;
        System.out.println("Area of Cone is : " + s1.area());
        System.out.println("Volume of Cone is : " +s1.volume());
        Cylinder cy = new Cylinder(r,h);
        s1 =cy;
        System.out.println("Area of Cylinder is : " + s1.area());
        System.out.println("Area of Cylinder is : " + s1.volume());
    }
}

```

## Output

```

Enter Radius, Height and Side Values :
5
7
9
Area of Cone is : 141.3
Volume of Cone is : 706.5
Area of Cylinder is : 24156.02
Area of Cylinder is : 549.5

```