

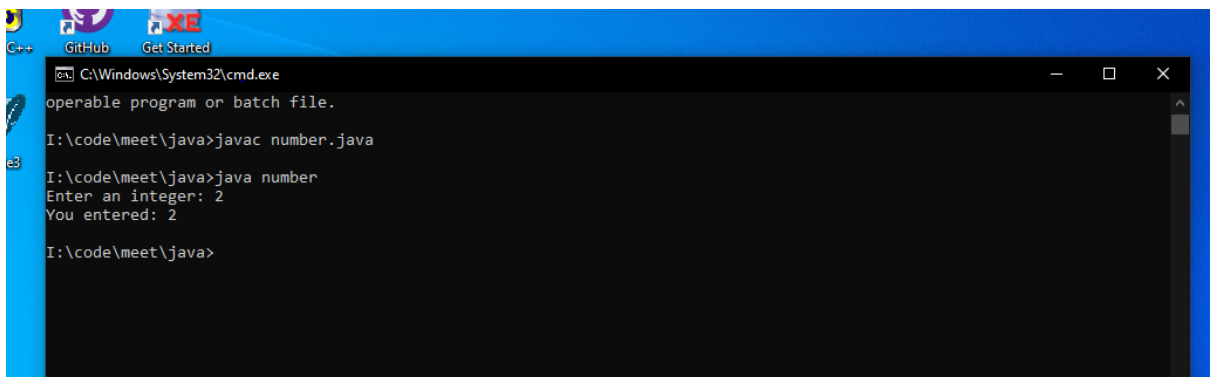
JAVA Assignment

1) Write a program in java to Read and Print an Integer value

```
import java.util.Scanner;

public class number{
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter an integer: ");
        int number = scanner.nextInt();
        System.out.println("You entered: " + number);
        scanner.close();
    }
}
```

OUTPUT:

A screenshot of a Windows command prompt window. The title bar shows 'C:\Windows\System32\cmd.exe'. The window content shows the following text:

```
C:\Windows\System32\cmd.exe
operable program or batch file.
I:\code\meet\java>javac number.java
I:\code\meet\java>java number
Enter an integer: 2
You entered: 2
I:\code\meet\java>
```

2) Write a program in java for Addition of Two Numbers with and without using Scanner.

WITH SCANNER:

```
import java.util.Scanner;

public class AdditionWithScanner {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter the first number: ");

        int num1 = scanner.nextInt();

        System.out.print("Enter the second number: ");

        int num2 = scanner.nextInt();

        int sum = num1 + num2;

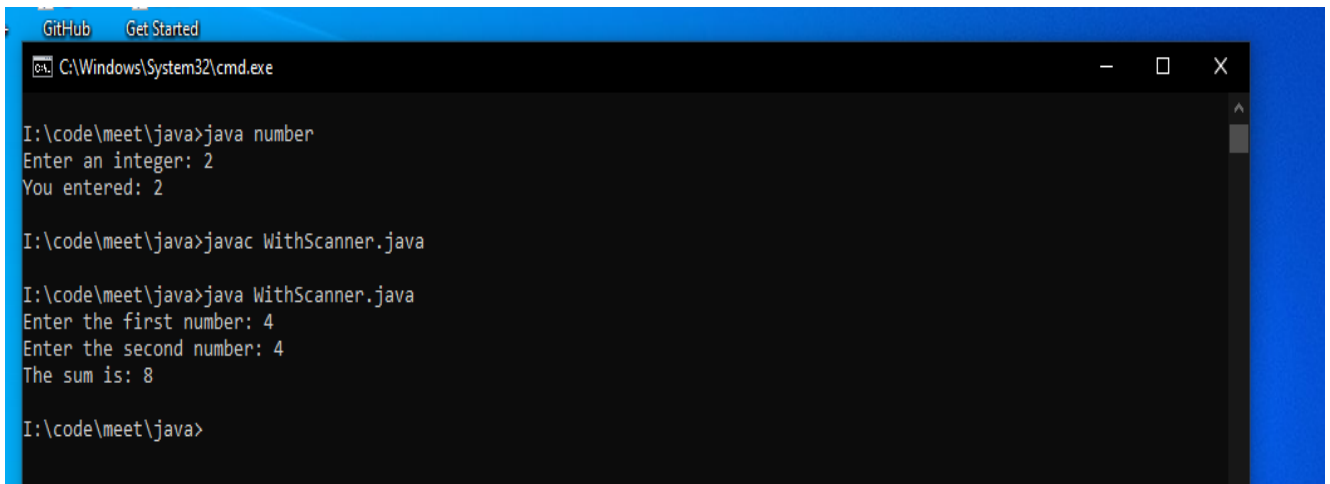
        System.out.println("The sum is: " + sum)

        scanner.close();

    }

}
```

OUTPUT:



```
C:\Windows\System32\cmd.exe

I:\code\meet\java>java number
Enter an integer: 2
You entered: 2

I:\code\meet\java>javac WithScanner.java

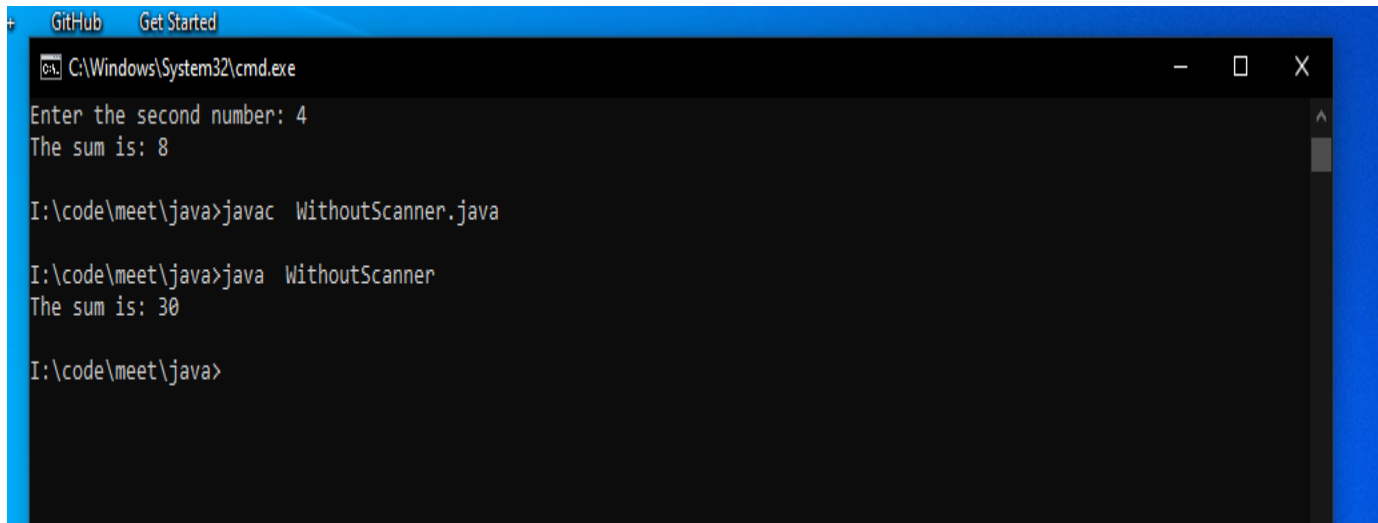
I:\code\meet\java>java WithScanner.java
Enter the first number: 4
Enter the second number: 4
The sum is: 8

I:\code\meet\java>
```

WithoutScanner:

```
public class WithoutScanner {  
    public static void main(String[] args) {  
        int num1 = 10;  
        int num2 = 20;  
        int sum = num1 + num2;  
        System.out.println("The sum is: " + sum);  
    }  
}
```

OUTPUT:



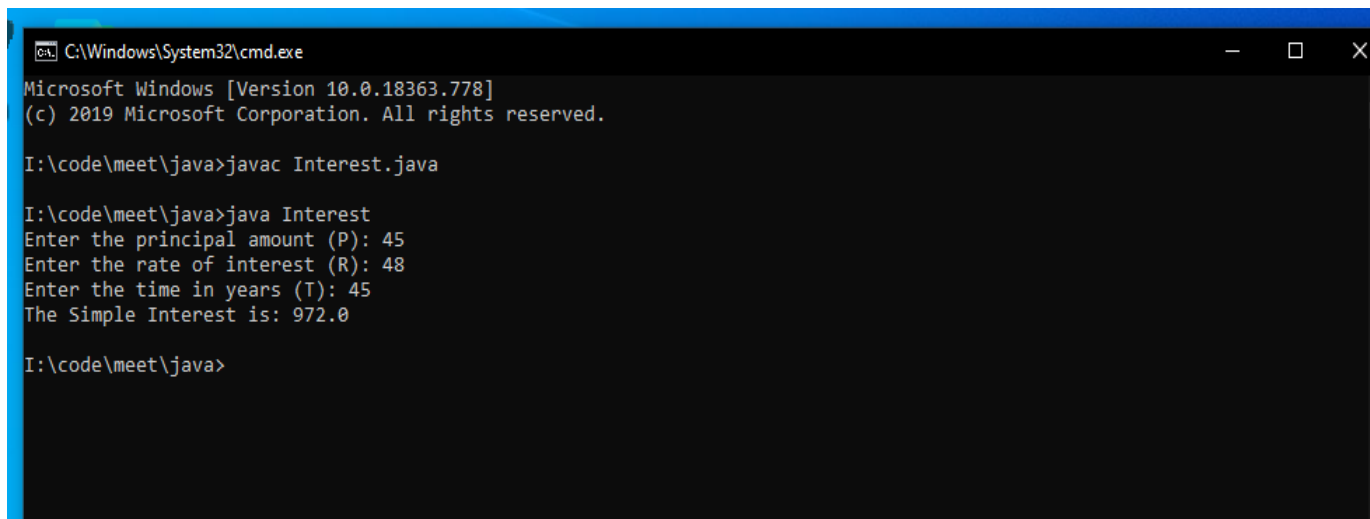
```
+  GitHub  Get Started  
C:\Windows\System32\cmd.exe  
Enter the second number: 4  
The sum is: 8  
  
I:\code\meet\java>javac  WithoutScanner.java  
  
I:\code\meet\java>java  WithoutScanner  
The sum is: 30  
  
I:\code\meet\java>
```

3) Write a program in java to calculate Simple interest.

```
import java.util.Scanner;
```

```
public class SimpleInterest {  
    public static void main(String[] args) {  
        Scanner scanner = new Scanner(System.in);  
        System.out.print("Enter the principal amount (P): ");  
        double principal = scanner.nextDouble();  
        System.out.print("Enter the rate of interest (R): ");  
        double rate = scanner.nextDouble();  
        System.out.print("Enter the time in years (T): ");  
        double time = scanner.nextDouble();  
        double simpleInterest = (principal * rate * time) / 100;  
        System.out.println("The Simple Interest is: " + simpleInterest);  
        scanner.close();  
    }  
}
```

OUTPUT:



```
C:\Windows\System32\cmd.exe  
Microsoft Windows [Version 10.0.18363.778]  
(c) 2019 Microsoft Corporation. All rights reserved.  
  
I:\code\meet\java>javac Interest.java  
  
I:\code\meet\java>java Interest  
Enter the principal amount (P): 45  
Enter the rate of interest (R): 48  
Enter the time in years (T): 45  
The Simple Interest is: 972.0  
  
I:\code\meet\java>
```

4) Write a program in java to display ASCII value of alphabets.

```
public class AsciiValue {  
    public static void main(String[] args) {  
        System.out.println("ASCII values of uppercase alphabets:");  
        for (char c = 'A'; c <= 'Z'; c++) {  
            System.out.println(c + " = " + (int) c);  
        }  
        System.out.println("\nASCII values of lowercase alphabets:");  
        for (char c = 'a'; c <= 'z'; c++) {  
            System.out.println(c + " = " + (int) c);  
        }  
    }  
}
```

OUTPUT:

```
C:\Windows\System32\cmd.exe  
ASCII values of uppercase alphabets:  
A = 65  
B = 66  
C = 67  
D = 68  
E = 69  
F = 70  
G = 71  
H = 72  
I = 73  
J = 74  
K = 75  
L = 76  
M = 77  
N = 78  
O = 79  
P = 80  
Q = 81  
R = 82  
S = 83  
T = 84  
U = 85  
V = 86  
W = 87  
X = 88  
Y = 89  
Z = 90  
  
ASCII values of lowercase alphabets:  
a = 97
```

5) Write a program in java to Calculate Area of The Circle.

```
import java.util.Scanner;

public class CircleArea {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter the radius of the circle: ");

        double radius = scanner.nextDouble();

        double area = Math.PI * Math.pow(radius, 2);

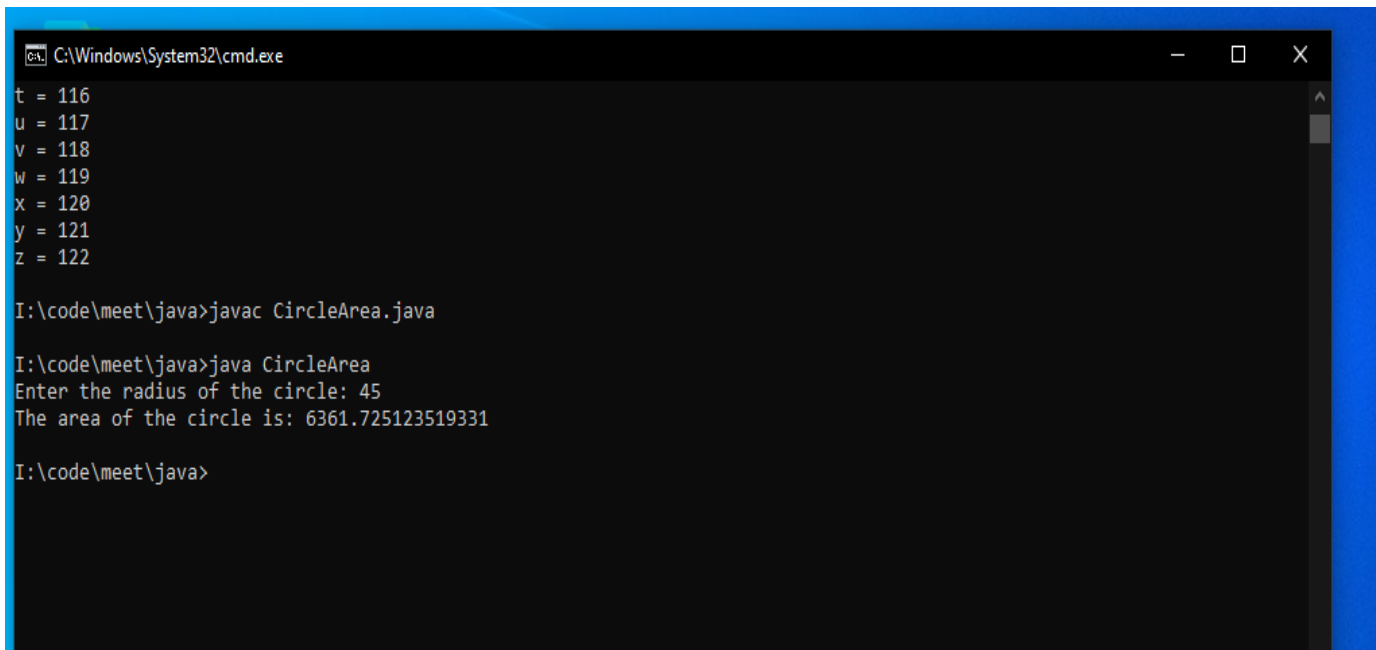
        System.out.println("The area of the circle is: " + area);

        scanner.close();

    }

}
```

OUTPUT:

A screenshot of a Windows command prompt window titled "C:\Windows\System32\cmd.exe". The window has a black background with white text. The text shows a series of lines: "t = 116", "u = 117", "v = 118", "w = 119", "x = 120", "y = 121", "z = 122", followed by a blank line. Then, the command "I:\code\meet\java>javac CircleArea.java" is entered. This is followed by "I:\code\meet\java>java CircleArea", then the prompt "Enter the radius of the circle: 45", and the output "The area of the circle is: 6361.725123519331". The final line shows the prompt "I:\code\meet\java>" again.

```
C:\Windows\System32\cmd.exe
t = 116
u = 117
v = 118
w = 119
x = 120
y = 121
z = 122

I:\code\meet\java>javac CircleArea.java

I:\code\meet\java>java CircleArea
Enter the radius of the circle: 45
The area of the circle is: 6361.725123519331

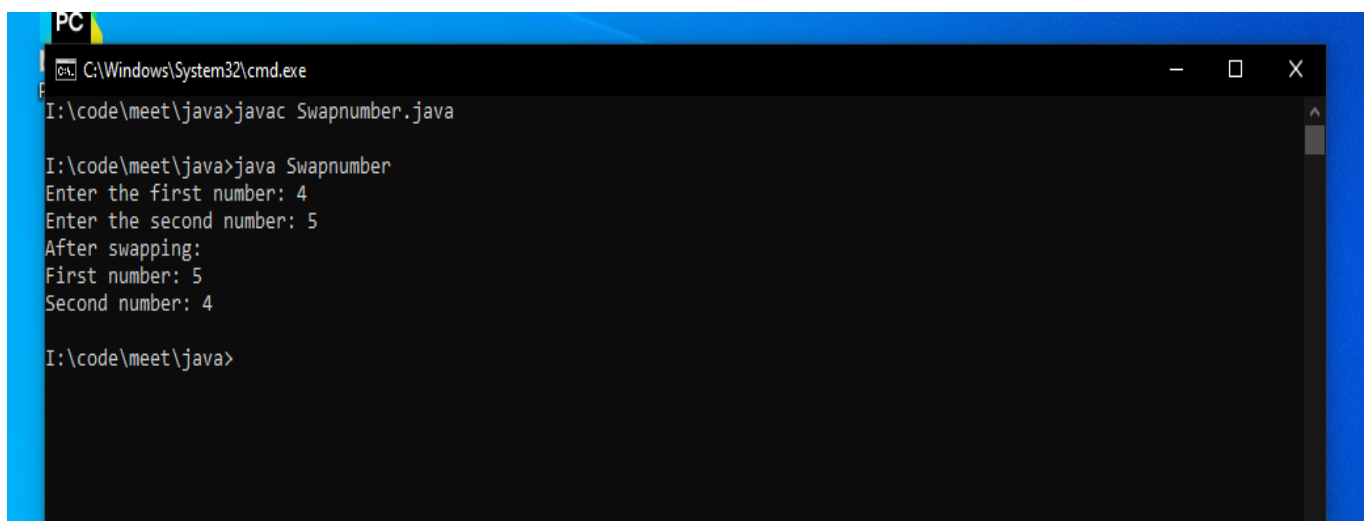
I:\code\meet\java>
```

6) Write a program in java to swap two numbers without using third variable.

```
import java.util.Scanner;
```

```
public class Swapnumber {  
    public static void main(String[] args) {  
        Scanner scanner = new Scanner(System.in);  
        System.out.print("Enter the first number: ");  
        int a = scanner.nextInt();  
        System.out.print("Enter the second number: ");  
        int b = scanner.nextInt();  
  
        a = a + b;  
        b = a - b;  
        a = a - b;  
  
        System.out.println("After swapping:");  
        System.out.println("First number: " + a);  
        System.out.println("Second number: " + b);  
        scanner.close();  
    }  
}
```

OUTPUT:



```
PC  
C:\Windows\System32\cmd.exe  
I:\code\meet\java>javac Swapnumber.java  
I:\code\meet\java>java Swapnumber  
Enter the first number: 4  
Enter the second number: 5  
After swapping:  
First number: 5  
Second number: 4  
I:\code\meet\java>
```

7) Write a program in java to Check Vowel or Consonant.

```
import java.util.Scanner;

public class Vowelorconsonant {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter a single character: ");

        char ch = scanner.next().toLowerCase().charAt(0);

        if (ch == 'a' || ch == 'e' || ch == 'i' || ch == 'o' || ch == 'u') {

            System.out.println(ch + " is a vowel.");

        } else if ((ch >= 'a' && ch <= 'z')) {

            System.out.println(ch + " is a consonant.");

        } else {

            System.out.println(ch + " is not a valid alphabet letter.");

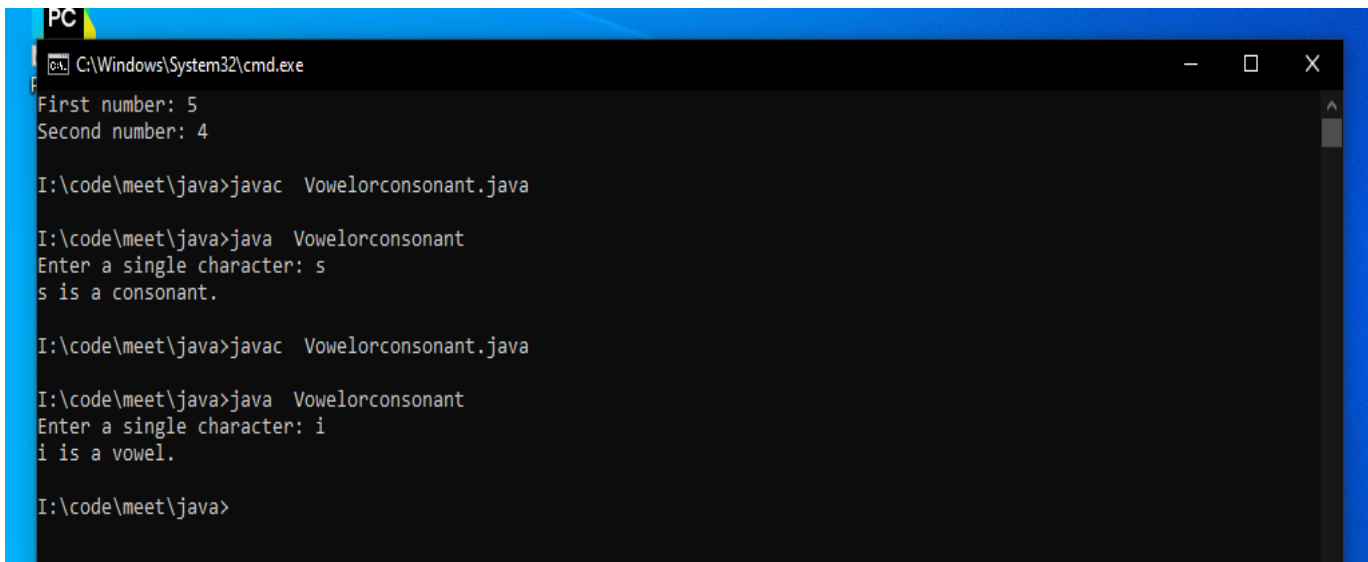
        }

        scanner.close();

    }

}
```

OUTPUT:

A screenshot of a Windows command prompt window titled "C:\Windows\System32\cmd.exe". The window shows the execution of a Java program. The user enters '5' and '4' for the first two prompts. Then, they compile the program with 'javac Vowelorconsonant.java' and run it with 'java Vowelorconsonant'. The program prompts for a single character. The user enters 's', and the program outputs 's is a consonant.'. The user then enters 'i', and the program outputs 'i is a vowel.'. The prompt 'I:\code\meet\java>' is visible at the bottom.

```
C:\Windows\System32\cmd.exe
First number: 5
Second number: 4

I:\code\meet\java>javac Vowelorconsonant.java

I:\code\meet\java>java Vowelorconsonant
Enter a single character: s
s is a consonant.

I:\code\meet\java>javac Vowelorconsonant.java

I:\code\meet\java>java Vowelorconsonant
Enter a single character: i
i is a vowel.

I:\code\meet\java>
```


8) Write a program in java to Check Whether a Number is Prime.

```
import java.util.Scanner;

public class Primenumber{

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter a number: ");

        int number = scanner.nextInt();

        boolean isPrime = true;

        if (number <= 1) {

            isPrime = false;

        } else {

            for (int i = 2; i <= Math.sqrt(number); i++) {

                if (number % i == 0) {

                    isPrime = false;

                    break;

                }

            }

        }

        if (isPrime) {

            System.out.println(number + " is a prime number.");

        } else {

            System.out.println(number + " is not a prime number.");

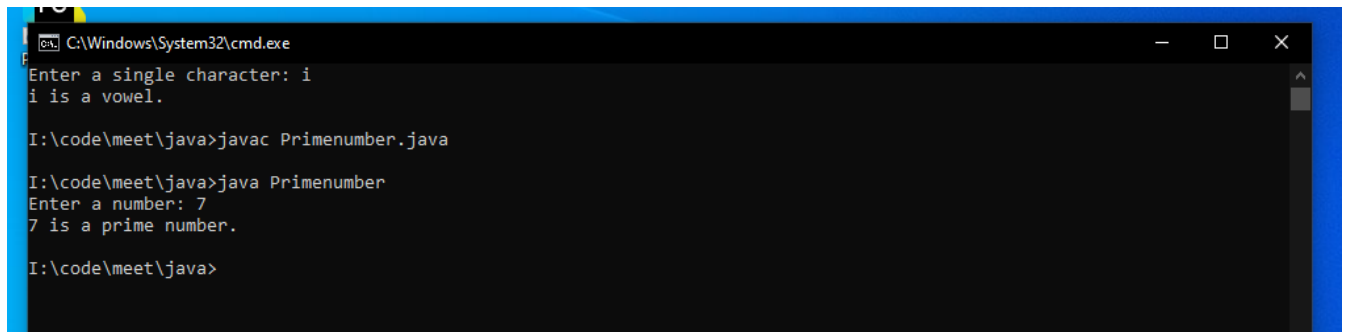
        }

        scanner.close();

    }

}
```

OUTPUT:



```
C:\Windows\System32\cmd.exe
Enter a single character: i
i is a vowel.

I:\code\meet\java>javac Primenumber.java

I:\code\meet\java>java Primenumber
Enter a number: 7
7 is a prime number.

I:\code\meet\java>
```

9) Write a program in java to find factorial of a number.

```
import java.util.Scanner;

public class Factorial {

    public static void main(String[] args) {

        Scanner input = new Scanner(System.in);

        System.out.print("Enter a number: ");

        int n = input.nextInt();

        int fact = 1;

        for (int i = 1; i <= n; i++) {

            fact *= i;

        }

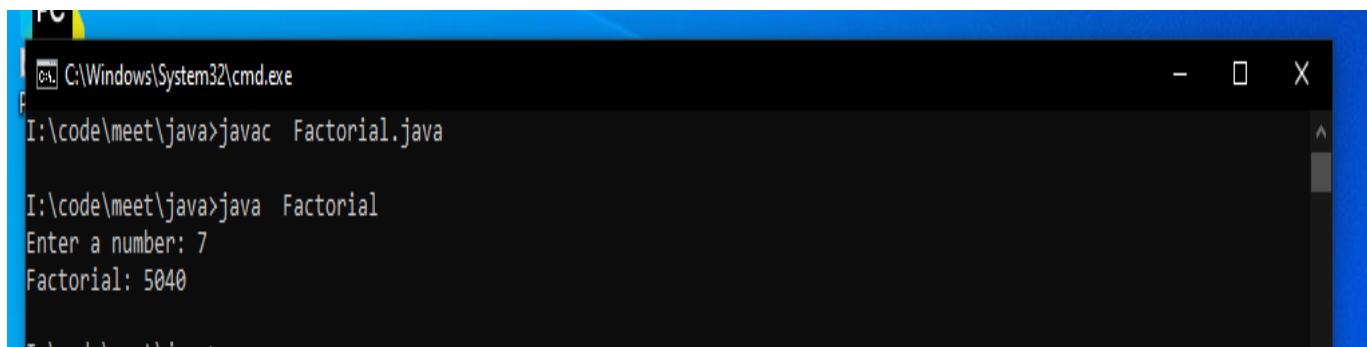
        System.out.println("Factorial: " + fact);

        input.close();

    }

}
```

OUTPUT:



```
C:\Windows\System32\cmd.exe

I:\code\meet\java>javac Factorial.java

I:\code\meet\java>java Factorial
Enter a number: 7
Factorial: 5040
```

10) Write a program in java to Find the Largest of three Numbers.

```
import java.util.Scanner;

public class Largestnumber {

    public static void main(String[] args) {

        Scanner input = new Scanner(System.in);

        System.out.print("Enter first number: ");

        int a = input.nextInt();

        System.out.print("Enter second number: ");

        int b = input.nextInt();

        System.out.print("Enter third number: ");

        int c = input.nextInt();

        int largest = a;

        if (b > largest) {

            largest = b;

        }

        if (c > largest) {

            largest = c;

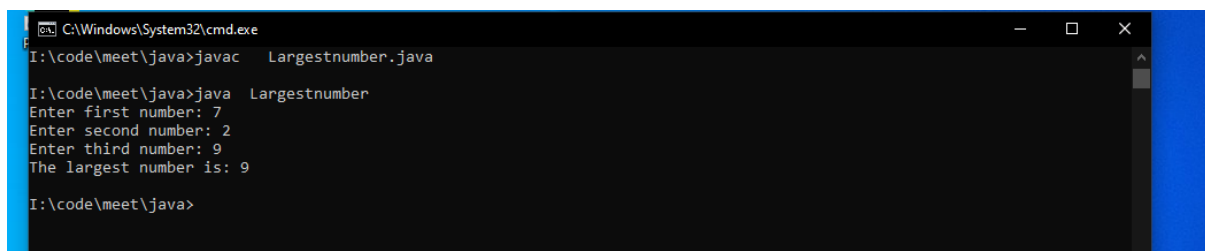
        }

        System.out.println("The largest number is: " + largest)

    }

}
```

OUTPUT:

A screenshot of a Windows command prompt window. The title bar shows 'C:\Windows\System32\cmd.exe'. The command prompt shows the following sequence of commands and output:
I:\code\meet\java>javac Largestnumber.java
I:\code\meet\java>java Largestnumber
Enter first number: 7
Enter second number: 2
Enter third number: 9
The largest number is: 9
I:\code\meet\java>

JAVA Assignment

11) Write a program in java to Find Sum of Fibonacci Series

```
import java.util.Scanner;

public class Fibonacci{

    public static void main(String[] args) {

        Scanner input = new Scanner(System.in);

        System.out.print("Enter the number of terms: ");

        int n = input.nextInt();

        int a = 0, b = 1, sum = 0;

        for (int i = 1; i <= n; i++) {

            sum += a;

            int next = a + b;

            a = b;

            b = next;

        }

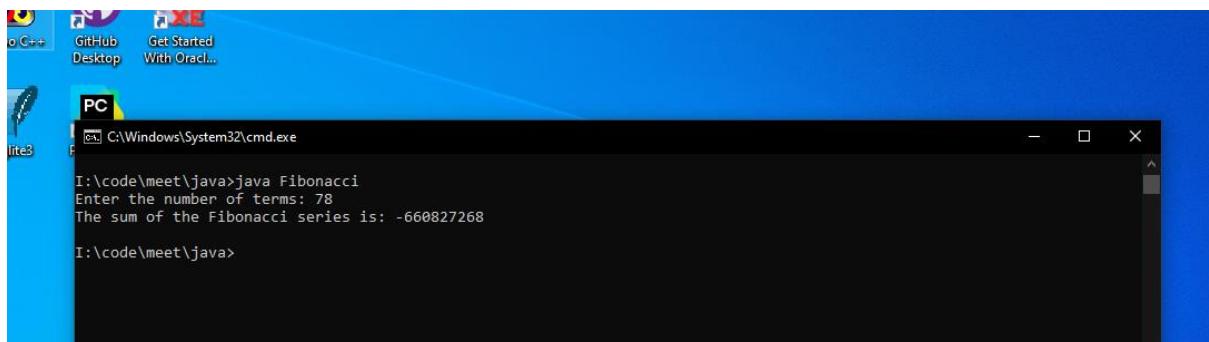
        System.out.println("The sum of the Fibonacci series is: " + sum);

        input.close();

    }

}
```

OUTPUT:



```
PC
C:\Windows\System32\cmd.exe

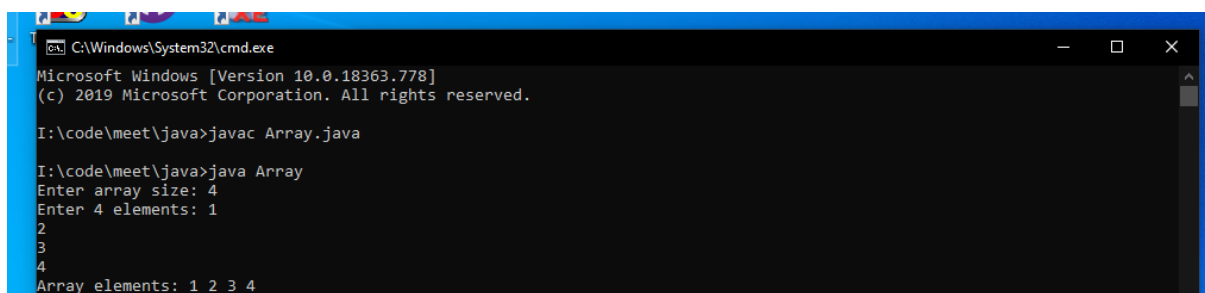
I:\code\meet\java>java Fibonacci
Enter the number of terms: 78
The sum of the Fibonacci series is: -660827268
I:\code\meet\java>
```

12) Write a program in java to print the elements of an array.

```
import java.util.Scanner;
```

```
public class Array {  
    public static void main(String[] args) {  
        Scanner input = new Scanner(System.in);  
        System.out.print("Enter array size: ");  
        int n = input.nextInt();  
        int[] arr = new int[n];  
        System.out.print("Enter " + n + " elements: ");  
        for (int i = 0; i < n; i++) {  
            arr[i] = input.nextInt();  
        }  
        System.out.print("Array elements: ");  
        for (int i : arr) {  
            System.out.print(i + " ");  
        }  
    }  
}
```

OUTPUT:



```
C:\Windows\System32\cmd.exe  
Microsoft Windows [Version 10.0.18363.778]  
(c) 2019 Microsoft Corporation. All rights reserved.  
  
I:\code\meet\java>javac Array.java  
  
I:\code\meet\java>java Array  
Enter array size: 4  
Enter 4 elements: 1  
2  
3  
4  
Array elements: 1 2 3 4
```

13) Write a program in java to print the elements of an array in reverse order

```
import java.util.Scanner;

public class Reversearray {

    public static void main(String[] args) {

        Scanner input = new Scanner(System.in);

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

        int n = input.nextInt();

        int[] arr = new int[n];

        System.out.print("Enter " + n + " elements: ");

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

            arr[i] = input.nextInt();

        }

        System.out.print("Array in reverse order: ");

        for (int i = n - 1; i >= 0; i--) {

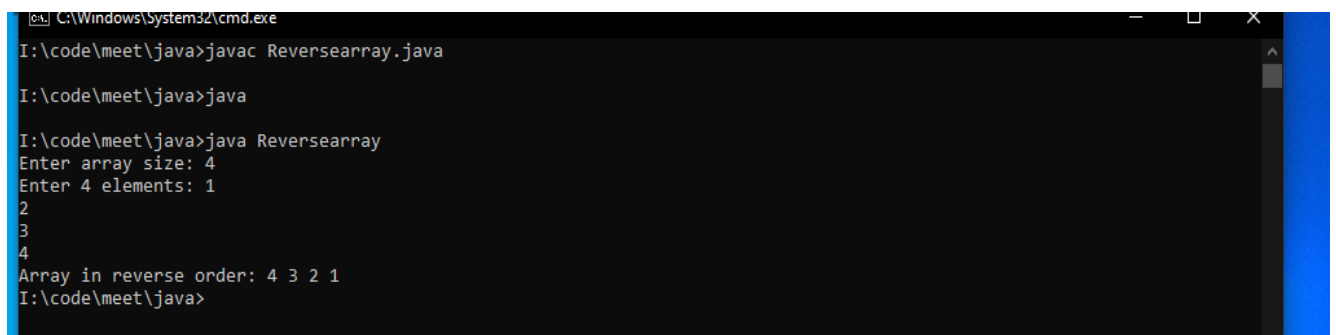
            System.out.print(arr[i] + " ");

        }

    }

}
```

OUTPUT:

A screenshot of a Windows command prompt window titled "C:\Windows\System32\cmd.exe". The prompt shows the user navigating to the directory "I:\code\meet\java" and running the following commands: "javac Reversearray.java", "java", and "java Reversearray". The program's output is displayed: "Enter array size: 4", "Enter 4 elements: 1", "2", "3", "4", and "Array in reverse order: 4 3 2 1". The prompt ends with "I:\code\meet\java>".

```
C:\Windows\System32\cmd.exe
I:\code\meet\java>javac Reversearray.java
I:\code\meet\java>java
I:\code\meet\java>java Reversearray
Enter array size: 4
Enter 4 elements: 1
2
3
4
Array in reverse order: 4 3 2 1
I:\code\meet\java>
```

14) Write a program in java to copy all elements of one array into another array.

```
import java.util.Scanner;

public class Copyarray {

    public static void main(String[] args) {

        Scanner input = new Scanner(System.in);

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

        int n = input.nextInt();

        int[] arr1 = new int[n];

        int[] arr2 = new int[n];

        System.out.print("Enter " + n + " elements: ");

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

            arr1[i] = input.nextInt();

        }

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

            arr2[i] = arr1[i];

        }

        System.out.print("Elements of the second array: ");

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


            System.out.print(arr2[i] + " ");

        }

    }

}
```

OUTPUT:



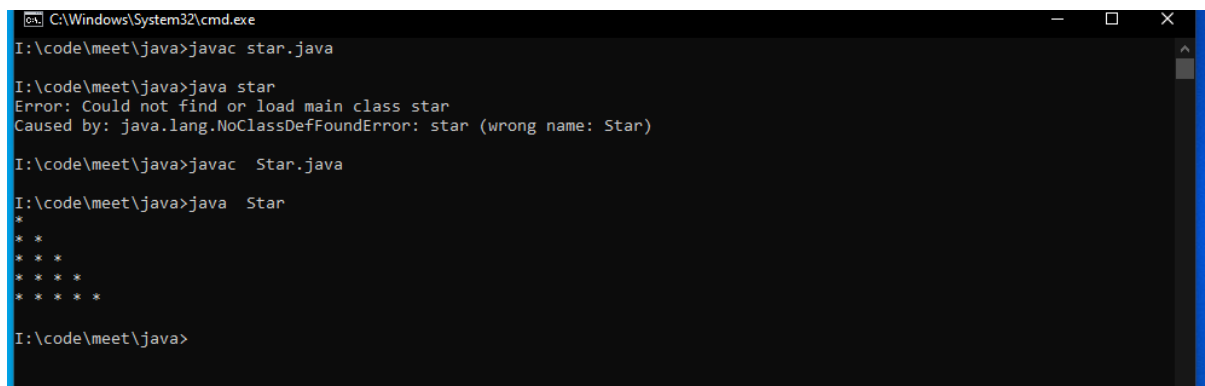
```
4
Array in reverse order: 4 3 2 1
I:\code\meet\java>javac Copyarray.java

I:\code\meet\java>java Copyarray
Enter array size: 4
Enter 4 elements: 1
2
3
4
Elements of the second array: 1 2 3 4
I:\code\meet\java>
```

15) Write a program in java to Print Right Triangle Star Pattern

```
public class Star {  
    public static void main(String[] args) {  
        int rows = 5; // Number of rows for the triangle  
        for (int i = 1; i <= rows; i++) {  
            for (int j = 1; j <= i; j++) {  
                System.out.print("* ");  
            }  
            System.out.println();  
        }  
    }  
}
```

OUTPUT:



```
C:\Windows\System32\cmd.exe  
I:\code\meet\java>javac star.java  
I:\code\meet\java>java star  
Error: Could not find or load main class star  
Caused by: java.lang.NoClassDefFoundError: star (wrong name: Star)  
I:\code\meet\java>javac Star.java  
I:\code\meet\java>java Star  
*  
* *  
* * *  
* * * *  
* * * * *  
I:\code\meet\java>
```