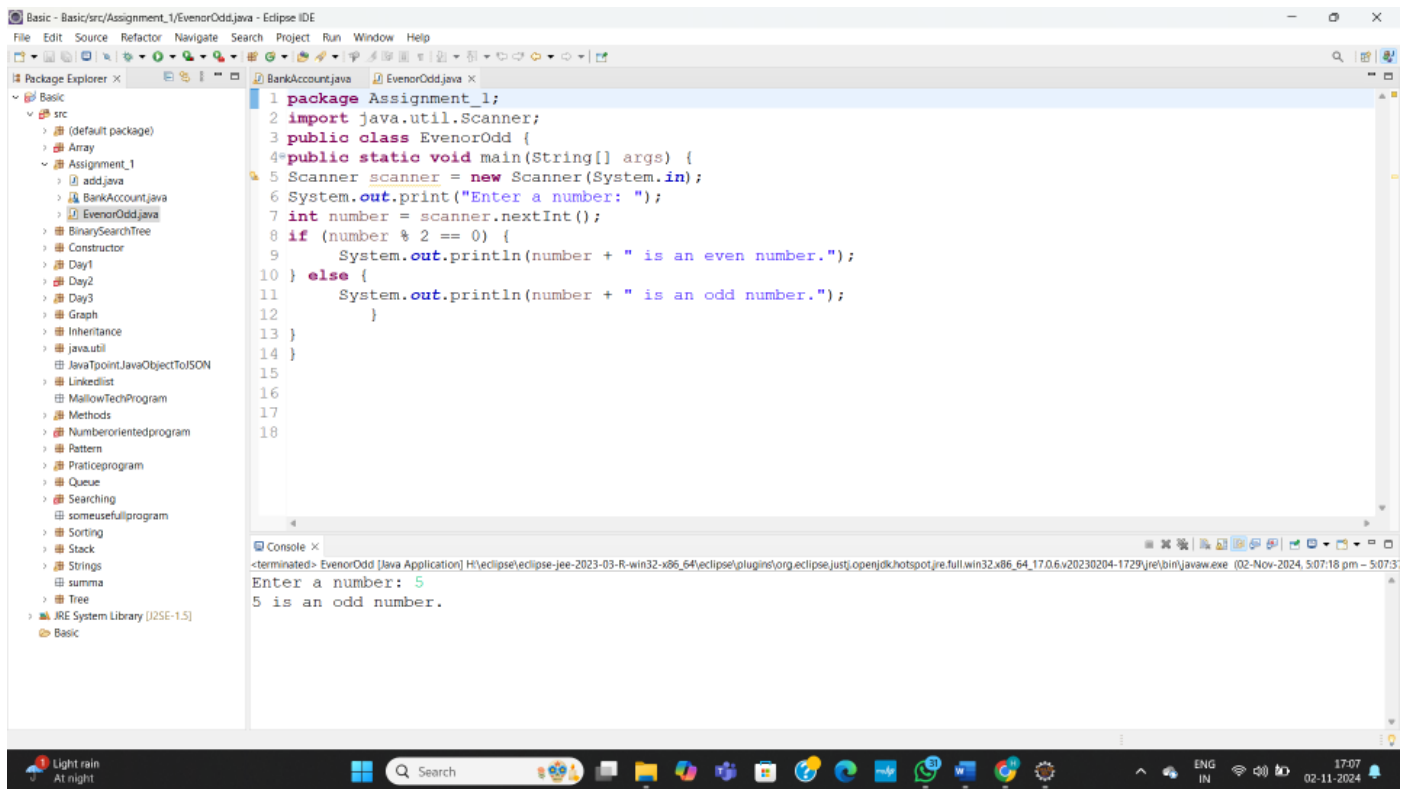


# Assignment-2

To check given number is Even or Odd

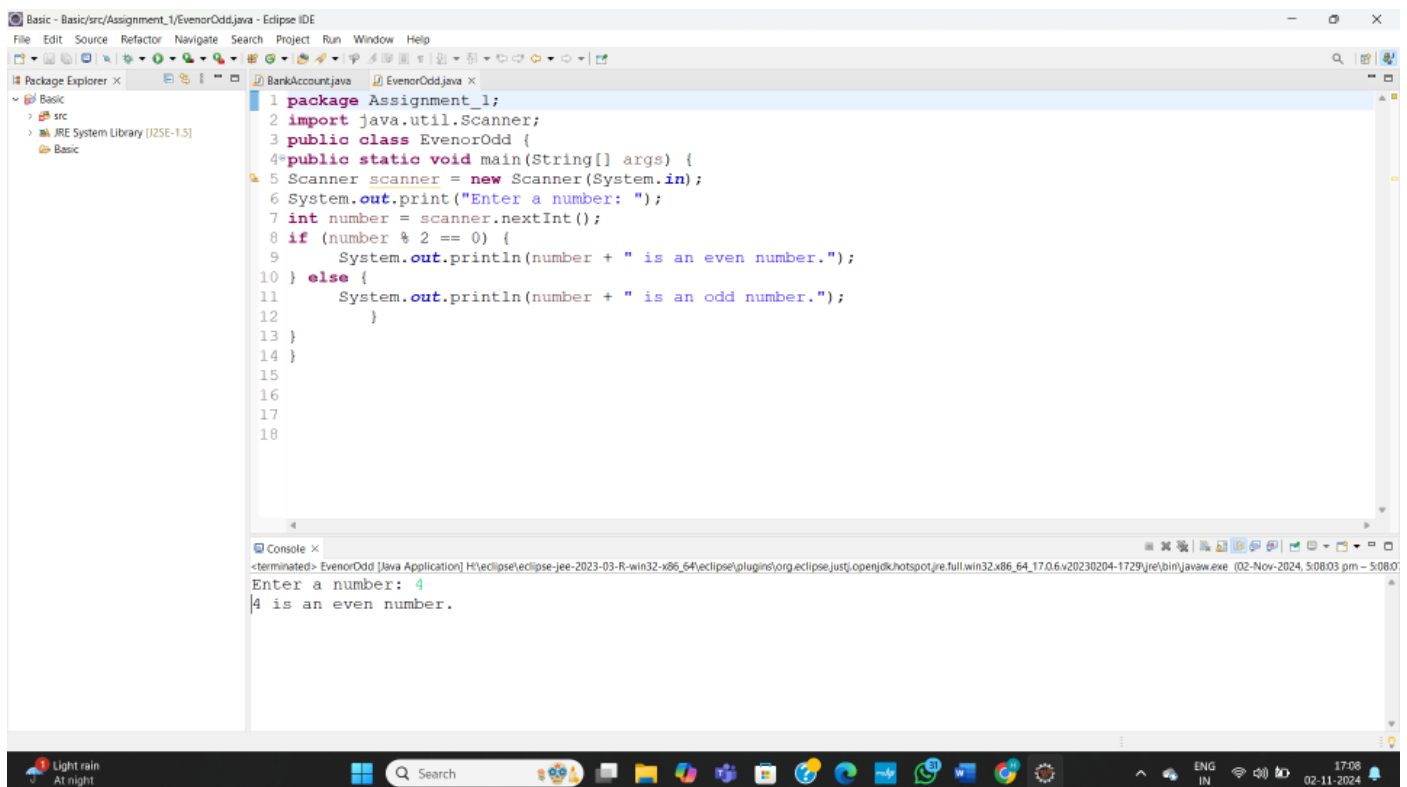


The screenshot shows the Eclipse IDE with the file `EvenorOdd.java` open. The code is as follows:

```
1 package Assignment_1;
2 import java.util.Scanner;
3 public class EvenorOdd {
4     public static void main(String[] args) {
5         Scanner scanner = new Scanner(System.in);
6         System.out.print("Enter a number: ");
7         int number = scanner.nextInt();
8         if (number % 2 == 0) {
9             System.out.println(number + " is an even number.");
10        } else {
11            System.out.println(number + " is an odd number.");
12        }
13    }
14 }
15
16
17
18
```

The console output shows the program execution:

```
<terminated> EvenorOdd [Java Application] H:\eclipse\ eclipse-jee-2023-03-R-win32-x86_64\eclipse\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_17.0.6.v20230204-1729\jre\bin\javaw.exe (02-Nov-2024, 5:07:18 pm - 5:07:30 pm)
Enter a number: 5
5 is an odd number.
```



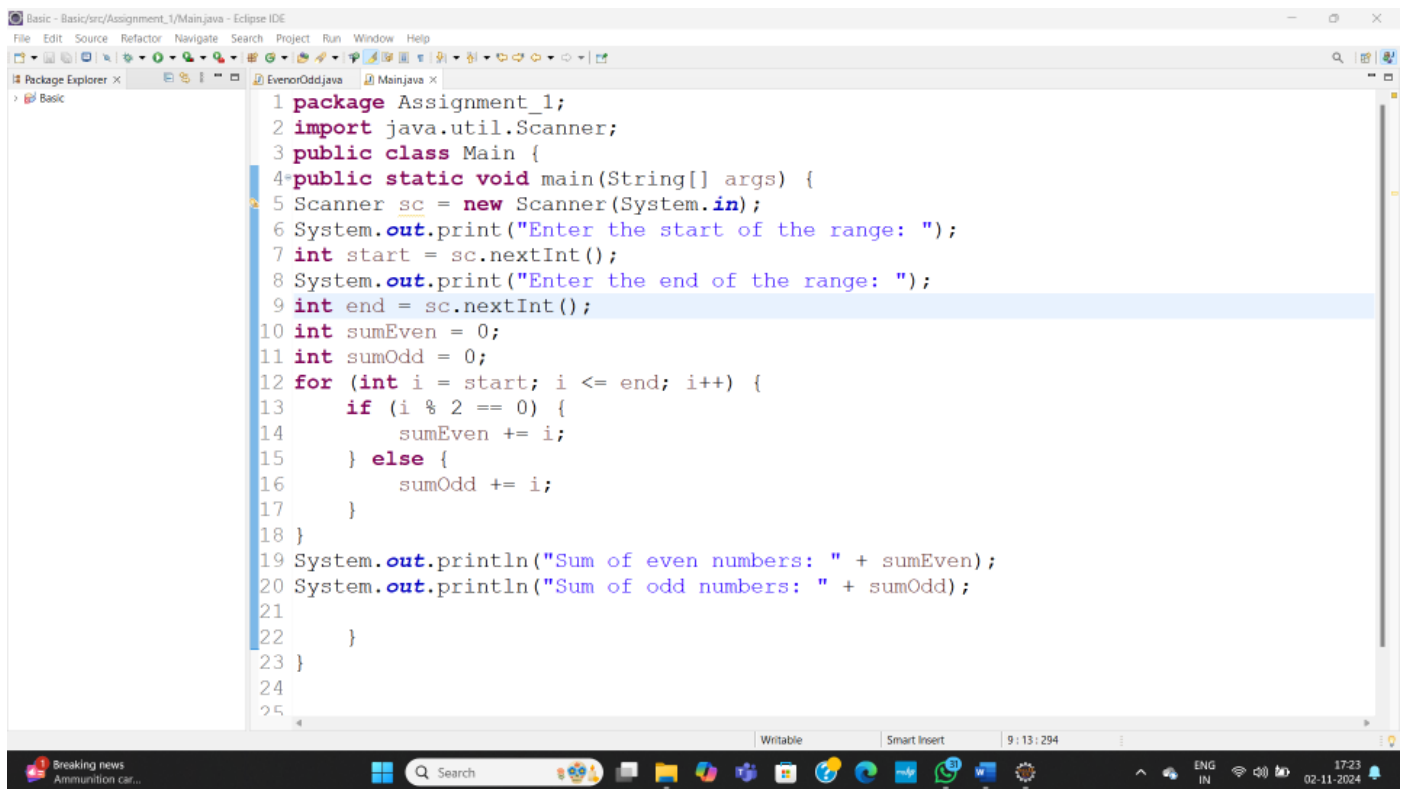
The screenshot shows the Eclipse IDE with the file `EvenorOdd.java` open. The code is the same as in the previous screenshot:

```
1 package Assignment_1;
2 import java.util.Scanner;
3 public class EvenorOdd {
4     public static void main(String[] args) {
5         Scanner scanner = new Scanner(System.in);
6         System.out.print("Enter a number: ");
7         int number = scanner.nextInt();
8         if (number % 2 == 0) {
9             System.out.println(number + " is an even number.");
10        } else {
11            System.out.println(number + " is an odd number.");
12        }
13    }
14 }
15
16
17
18
```

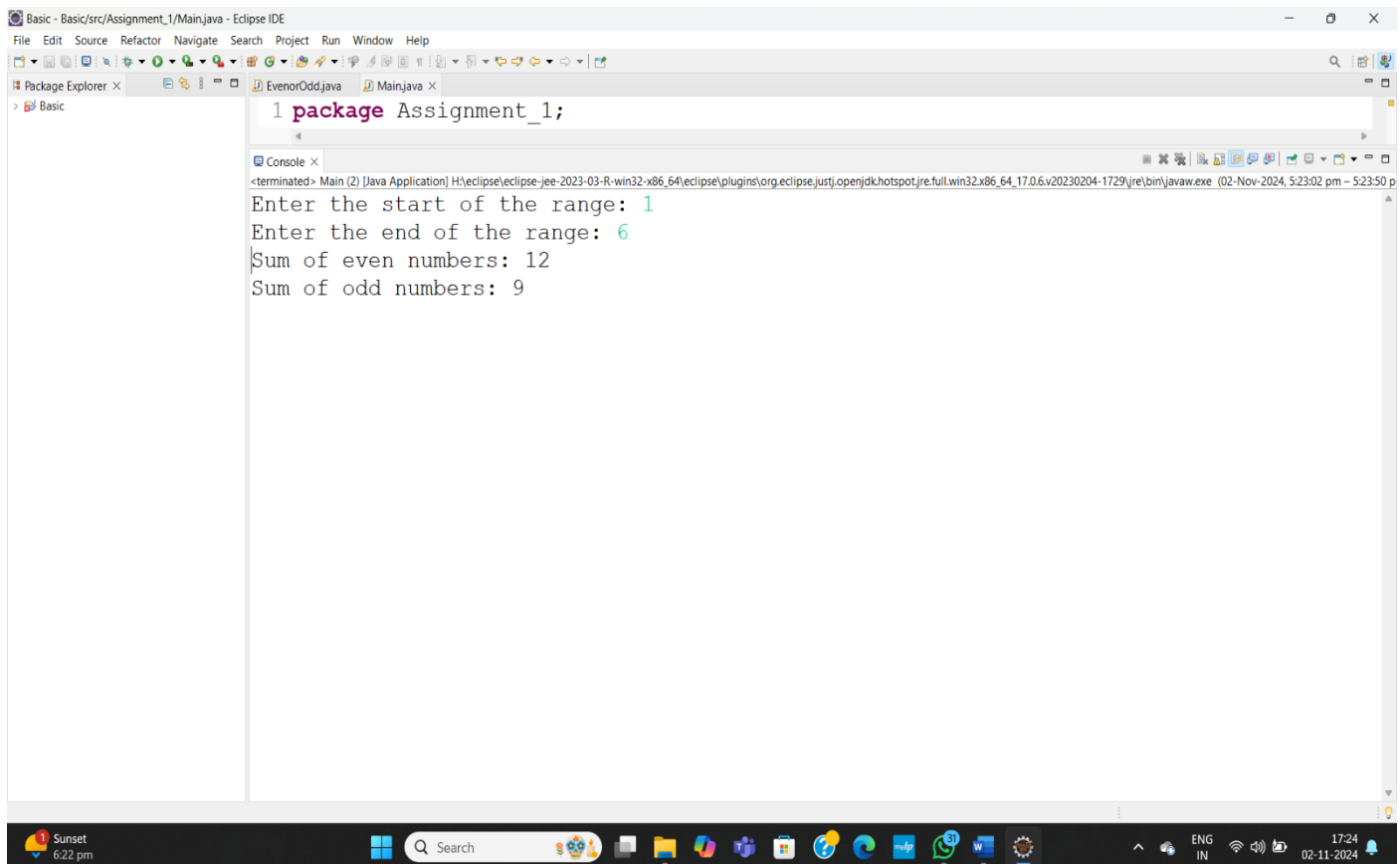
The console output shows the program execution:

```
<terminated> EvenorOdd [Java Application] H:\eclipse\ eclipse-jee-2023-03-R-win32-x86_64\eclipse\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_17.0.6.v20230204-1729\jre\bin\javaw.exe (02-Nov-2024, 5:08:03 pm - 5:08:07 pm)
Enter a number: 4
4 is an even number.
```

## To Find the sum of even and odd number with in a given range

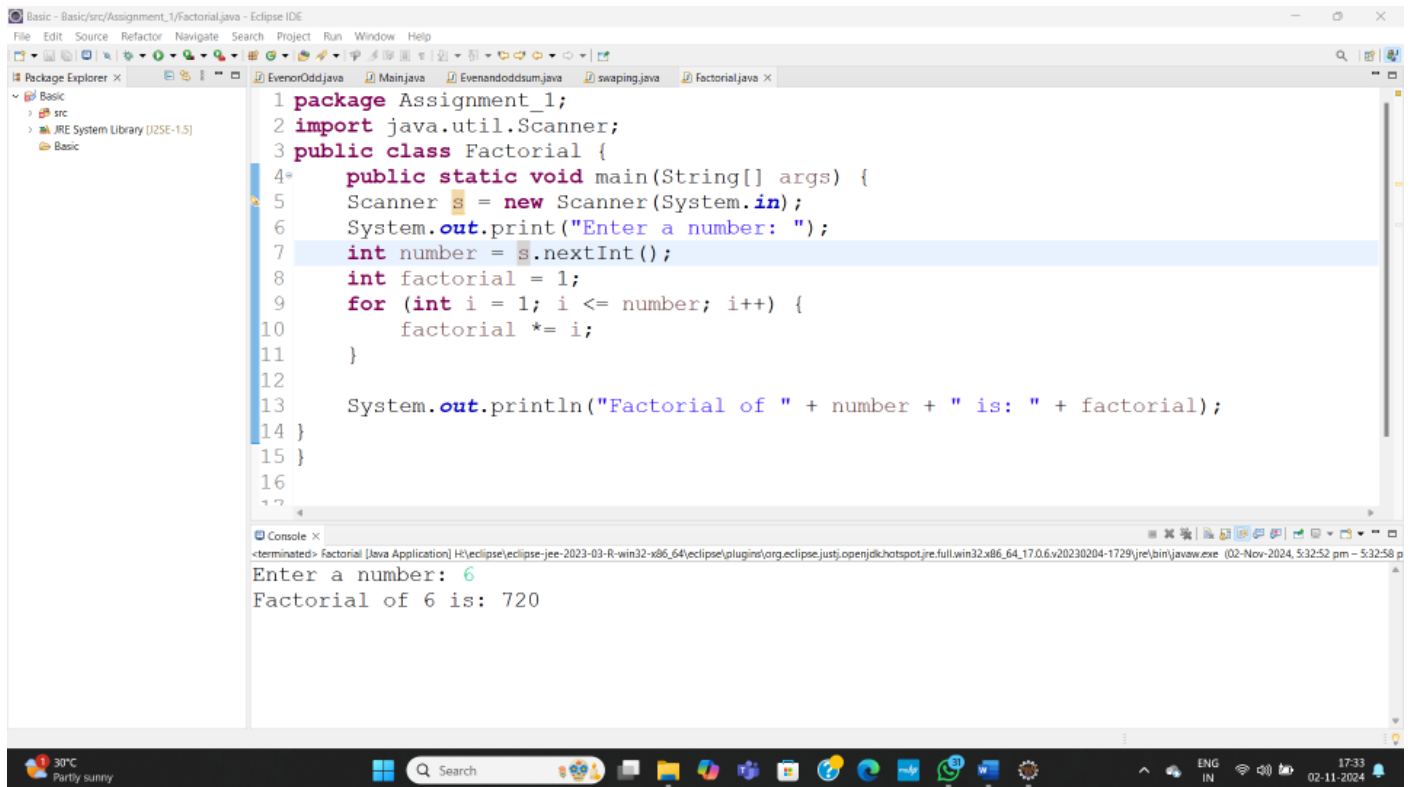


```
1 package Assignment_1;
2 import java.util.Scanner;
3 public class Main {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6         System.out.print("Enter the start of the range: ");
7         int start = sc.nextInt();
8         System.out.print("Enter the end of the range: ");
9         int end = sc.nextInt();
10        int sumEven = 0;
11        int sumOdd = 0;
12        for (int i = start; i <= end; i++) {
13            if (i % 2 == 0) {
14                sumEven += i;
15            } else {
16                sumOdd += i;
17            }
18        }
19        System.out.println("Sum of even numbers: " + sumEven);
20        System.out.println("Sum of odd numbers: " + sumOdd);
21    }
22 }
23 }
24
25 }
```



```
<terminated> Main (2) [Java Application] H:\eclipse\ eclipse-jee-2023-03-R-win32-x86_64\ eclipse\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_17.0.6.v20230204-1729\jre\bin\javaw.exe (02-Nov-2024, 5:23:02 pm - 5:23:50 p
Enter the start of the range: 1
Enter the end of the range: 6
Sum of even numbers: 12
Sum of odd numbers: 9
```

# Factorial Program



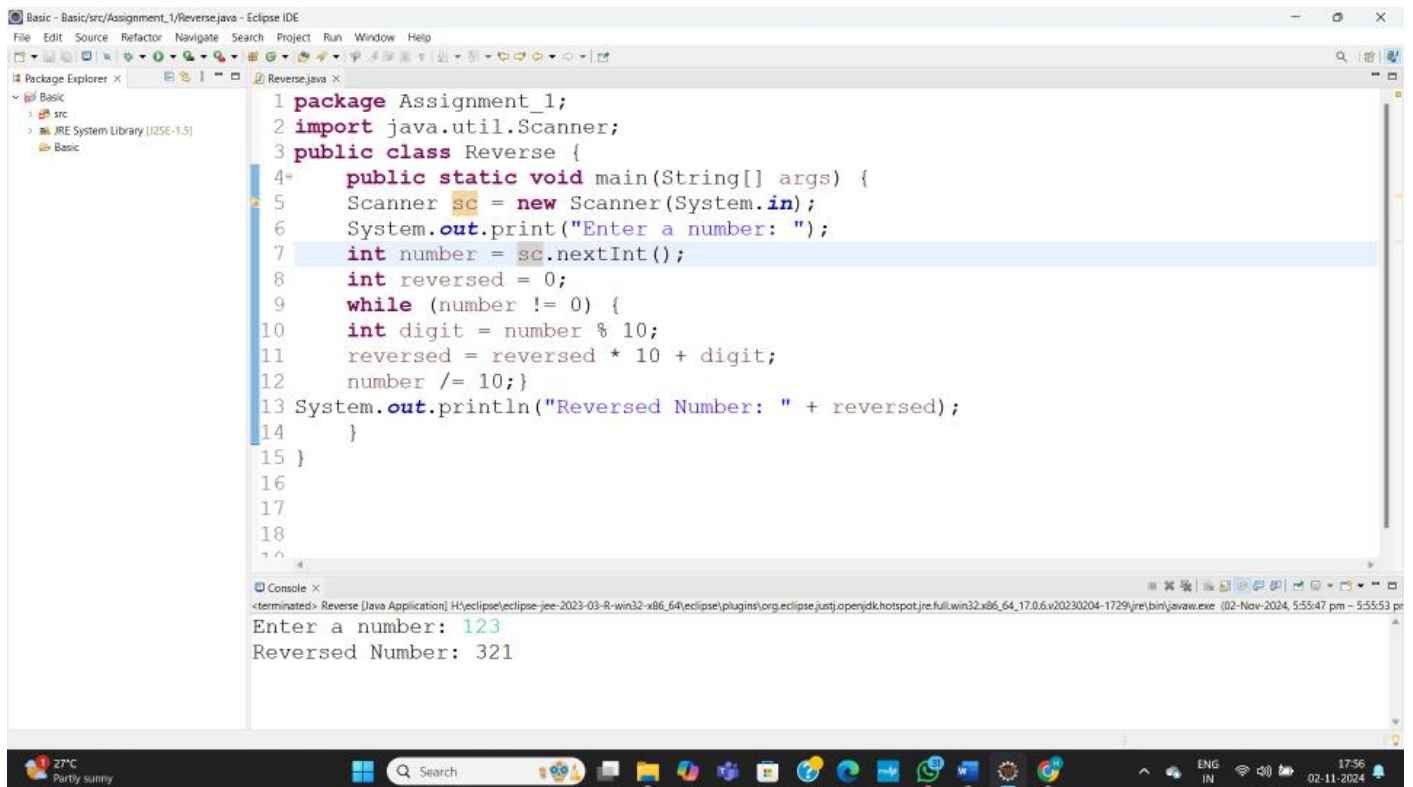
The screenshot shows the Eclipse IDE with a Java project named 'Basic'. The 'Package Explorer' on the left shows the project structure. The main editor displays the code for 'Factorial.java'. The code uses a Scanner to take input from the user and calculates the factorial using a for loop. The console output shows the user entering '6' and the program outputting 'Factorial of 6 is: 720'.

```
1 package Assignment_1;
2 import java.util.Scanner;
3 public class Factorial {
4     public static void main(String[] args) {
5         Scanner s = new Scanner(System.in);
6         System.out.print("Enter a number: ");
7         int number = s.nextInt();
8         int factorial = 1;
9         for (int i = 1; i <= number; i++) {
10             factorial *= i;
11         }
12
13         System.out.println("Factorial of " + number + " is: " + factorial);
14     }
15 }
16 }
```

Console Output:

```
<terminated> Factorial [Java Application] H:\eclipse\ eclipse-jee-2023-03-R-win32-x86_64\ eclipse\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64.17.0.6.v20230204-1729\jre\bin\javaw.exe (02-Nov-2024, 5:32:52 pm - 5:32:58 p
Enter a number: 6
Factorial of 6 is: 720
```

# Reverse a Integer Program



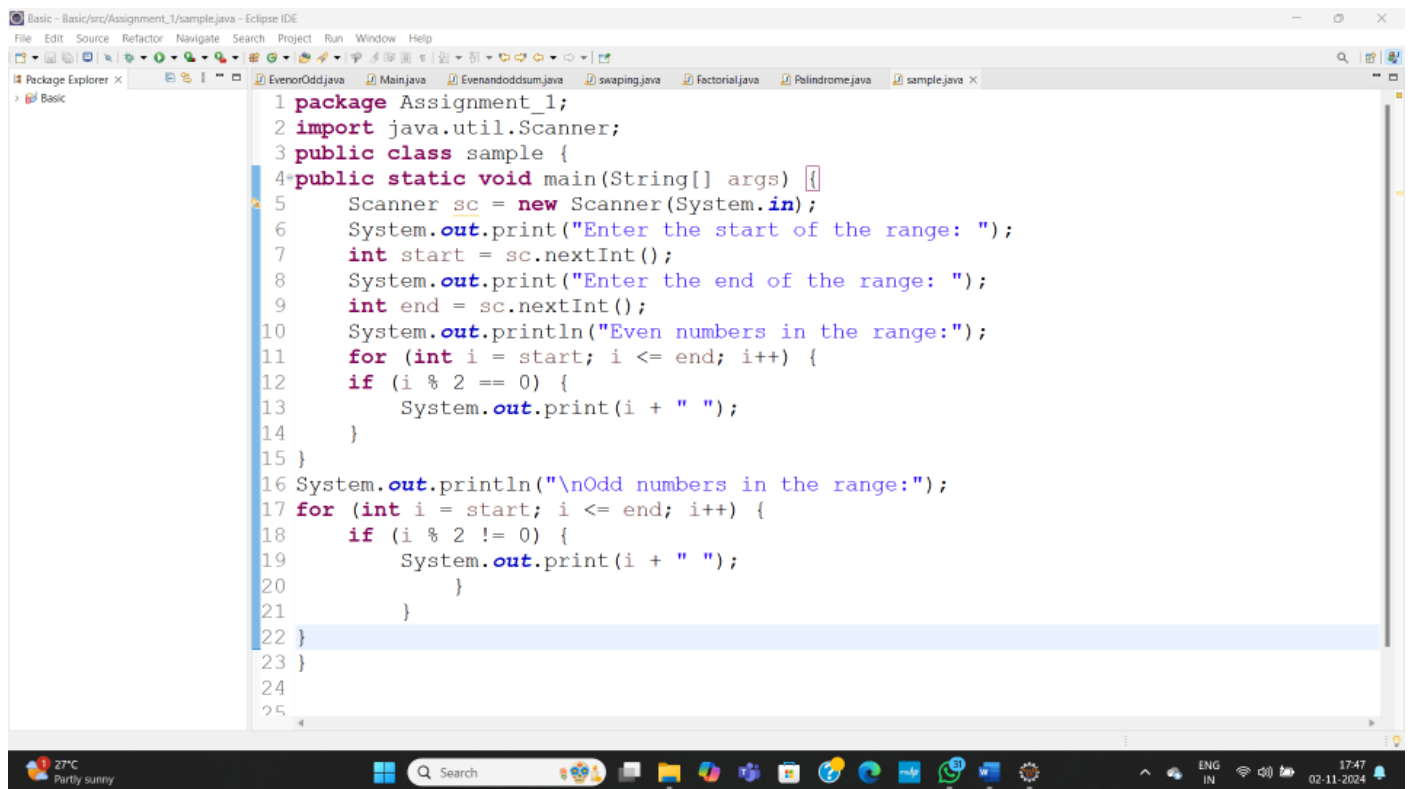
The screenshot shows the Eclipse IDE with a Java project named 'Basic'. The 'Package Explorer' on the left shows the project structure. The main editor displays the code for 'Reverse.java'. The code uses a Scanner to take input from the user and reverses the number using a while loop. The console output shows the user entering '123' and the program outputting 'Reversed Number: 321'.

```
1 package Assignment_1;
2 import java.util.Scanner;
3 public class Reverse {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6         System.out.print("Enter a number: ");
7         int number = sc.nextInt();
8         int reversed = 0;
9         while (number != 0) {
10             int digit = number % 10;
11             reversed = reversed * 10 + digit;
12             number /= 10;
13         }
14         System.out.println("Reversed Number: " + reversed);
15     }
16 }
17 }
18 }
```

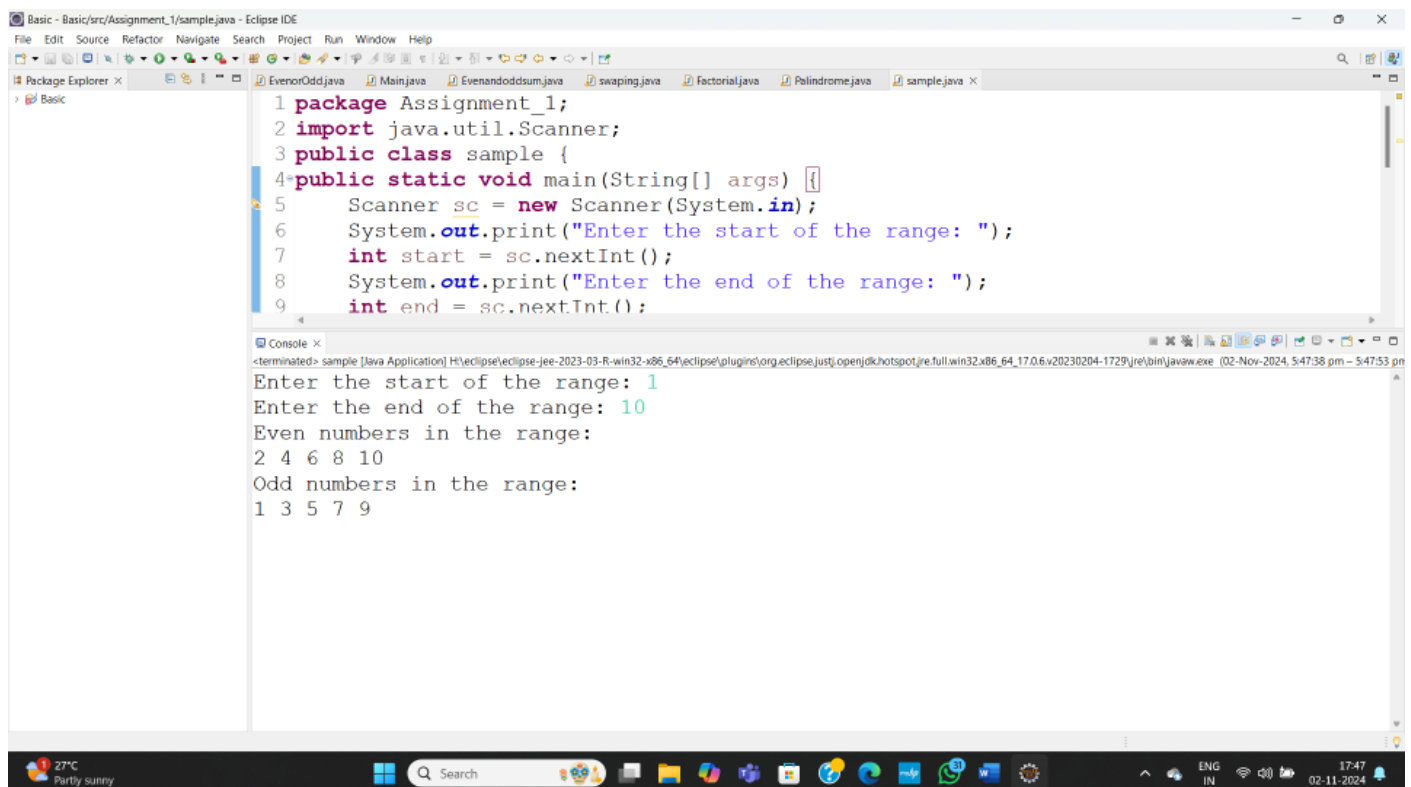
Console Output:

```
<terminated> Reverse [Java Application] H:\eclipse\ eclipse-jee-2023-03-R-win32-x86_64\ eclipse\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64.17.0.6.v20230204-1729\jre\bin\javaw.exe (02-Nov-2024, 5:55:47 pm - 5:55:53 p
Enter a number: 123
Reversed Number: 321
```

# To Determine the number of Even and odd numbers within a given range



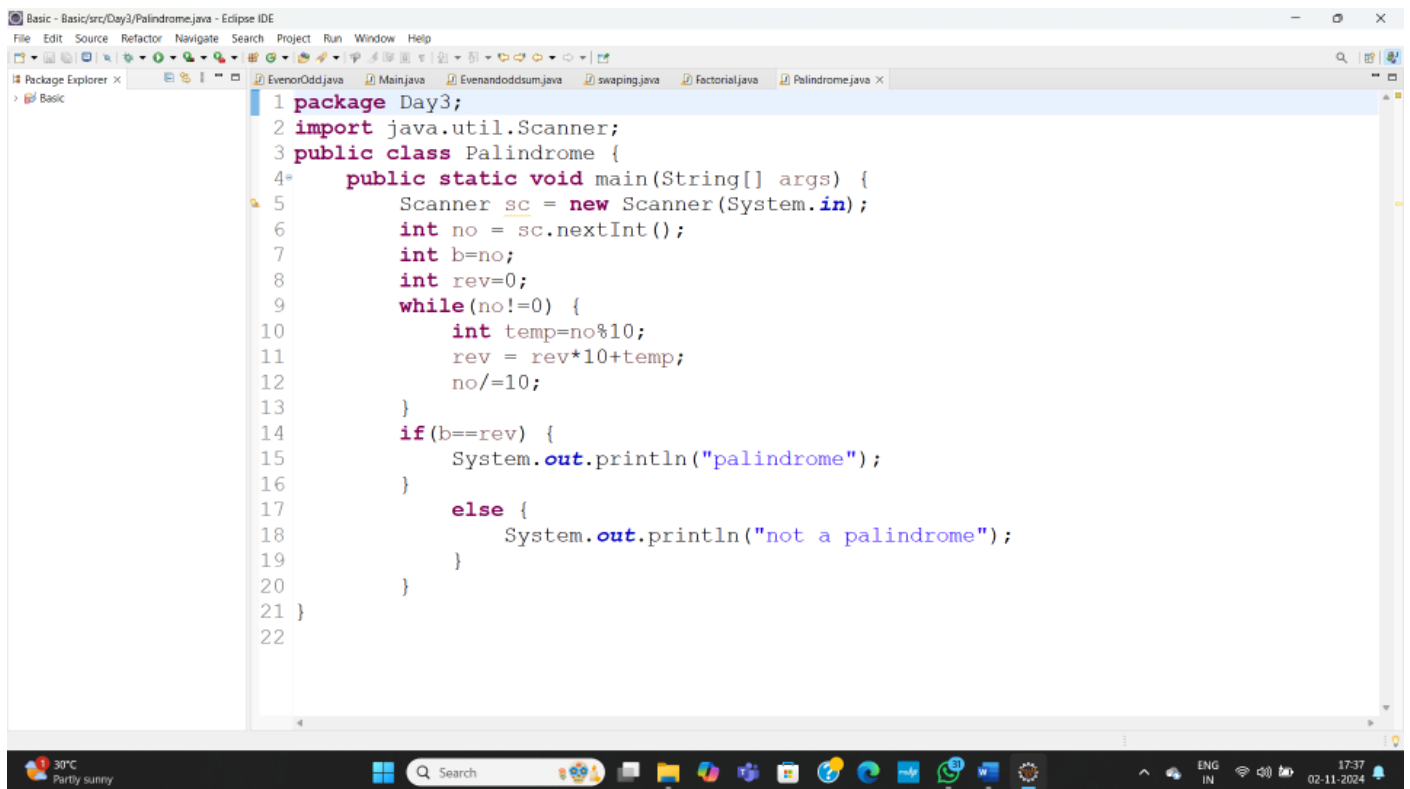
```
1 package Assignment_1;
2 import java.util.Scanner;
3 public class sample {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6         System.out.print("Enter the start of the range: ");
7         int start = sc.nextInt();
8         System.out.print("Enter the end of the range: ");
9         int end = sc.nextInt();
10        System.out.println("Even numbers in the range:");
11        for (int i = start; i <= end; i++) {
12            if (i % 2 == 0) {
13                System.out.print(i + " ");
14            }
15        }
16        System.out.println("\nOdd numbers in the range:");
17        for (int i = start; i <= end; i++) {
18            if (i % 2 != 0) {
19                System.out.print(i + " ");
20            }
21        }
22    }
23 }
24
25
```



```
1 package Assignment_1;
2 import java.util.Scanner;
3 public class sample {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6         System.out.print("Enter the start of the range: ");
7         int start = sc.nextInt();
8         System.out.print("Enter the end of the range: ");
9         int end = sc.nextInt();
10    }
11 }

<terminated> sample [Java Application] H:\eclipse\ eclipse-jee-2023-03-R-win32-x86_64\eclipse\plugins\org.eclipse.justi.openjdk hotspot.jre.full.win32.x86_64.17.0.6.v20230204-1729\jre\bin\javaw.exe (02-Nov-2024, 5:47:38 pm - 5:47:53 pm)
Enter the start of the range: 1
Enter the end of the range: 10
Even numbers in the range:
2 4 6 8 10
Odd numbers in the range:
1 3 5 7 9
```

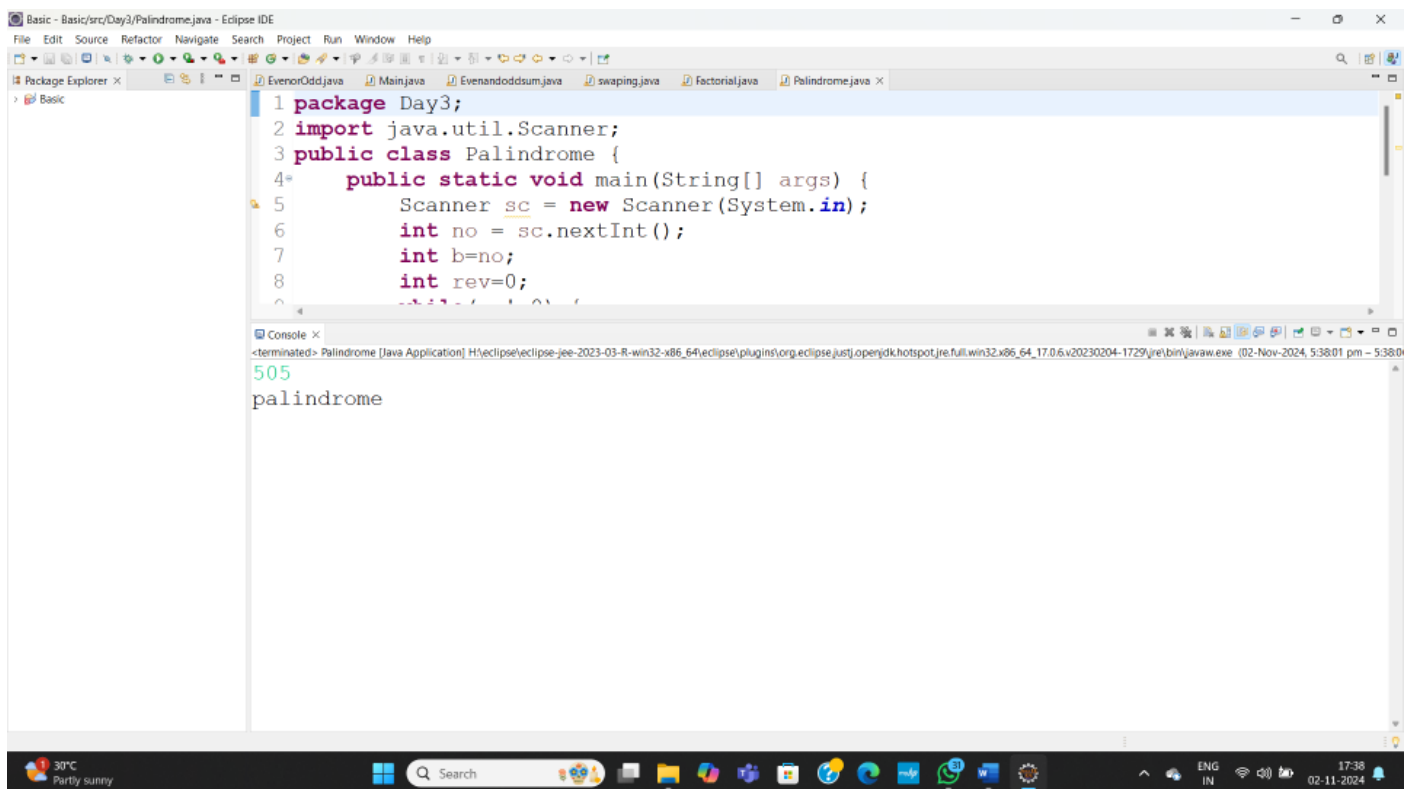
To check the Given number is palindrome or not



The screenshot shows the Eclipse IDE with the file 'Palindome.java' open. The code is as follows:

```
1 package Day3;
2 import java.util.Scanner;
3 public class Palindrome {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6         int no = sc.nextInt();
7         int b=no;
8         int rev=0;
9         while(no!=0) {
10             int temp=no%10;
11             rev = rev*10+temp;
12             no/=10;
13         }
14         if(b==rev) {
15             System.out.println("palindrome");
16         }
17         else {
18             System.out.println("not a palindrome");
19         }
20     }
21 }
22
```

The bottom of the image shows the Windows taskbar with a weather widget indicating 30°C and 'Partly sunny', and the system clock showing 17:37 on 02-11-2024.

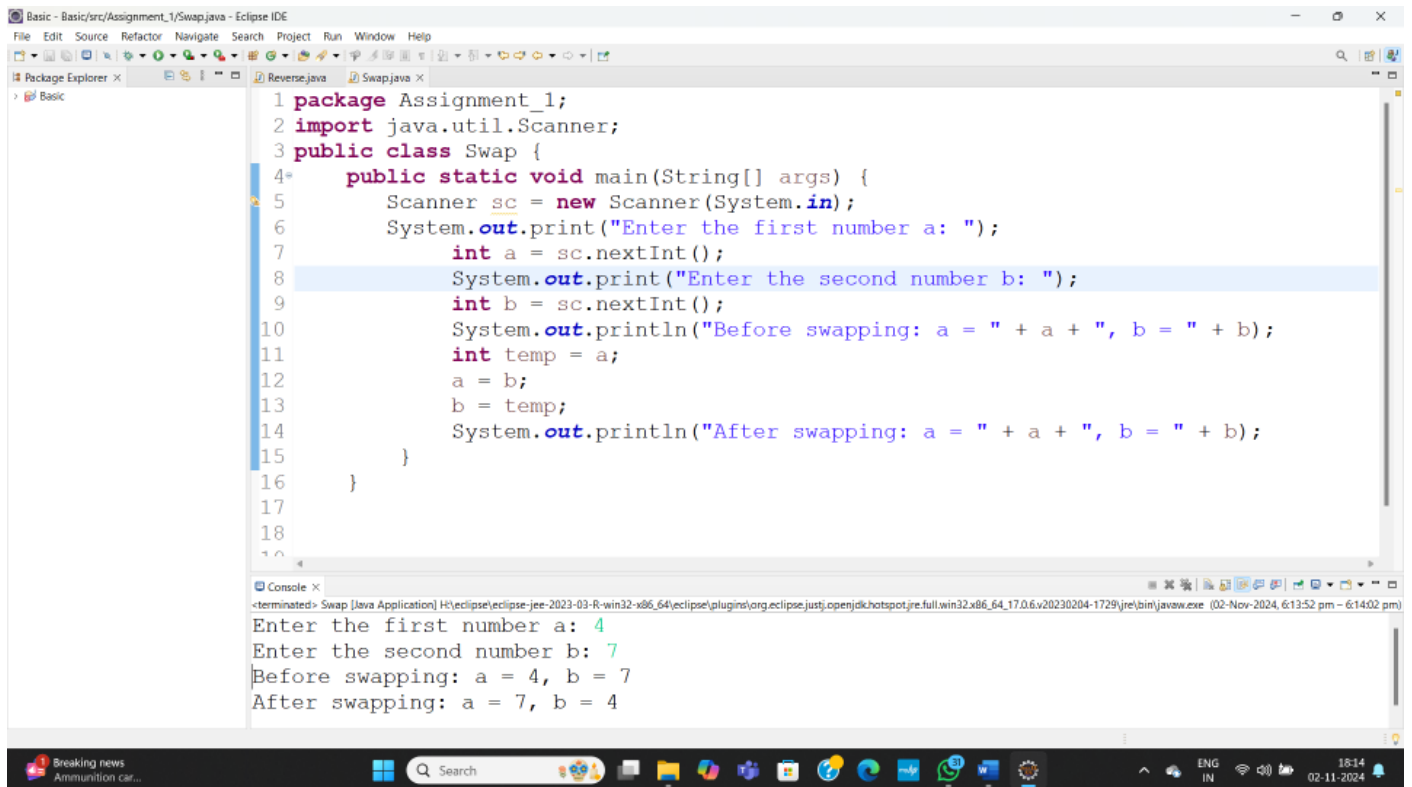


This screenshot shows the same Eclipse IDE with the 'Palindome.java' file. Below the code editor, the 'Console' window is visible, showing the output of the program:

```
<terminated> Palindrome [Java Application] H:\eclipse\ eclipse-jee-2023-03-R-win32-x86_64\eclipse\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_17.0.6.v20230204-1729\jre\bin\javaw.exe (02-Nov-2024, 5:38:01 pm)
505
palindrome
```

The bottom of the image shows the Windows taskbar with a weather widget indicating 30°C and 'Partly sunny', and the system clock showing 17:38 on 02-11-2024.

# Swapping with Third Variable

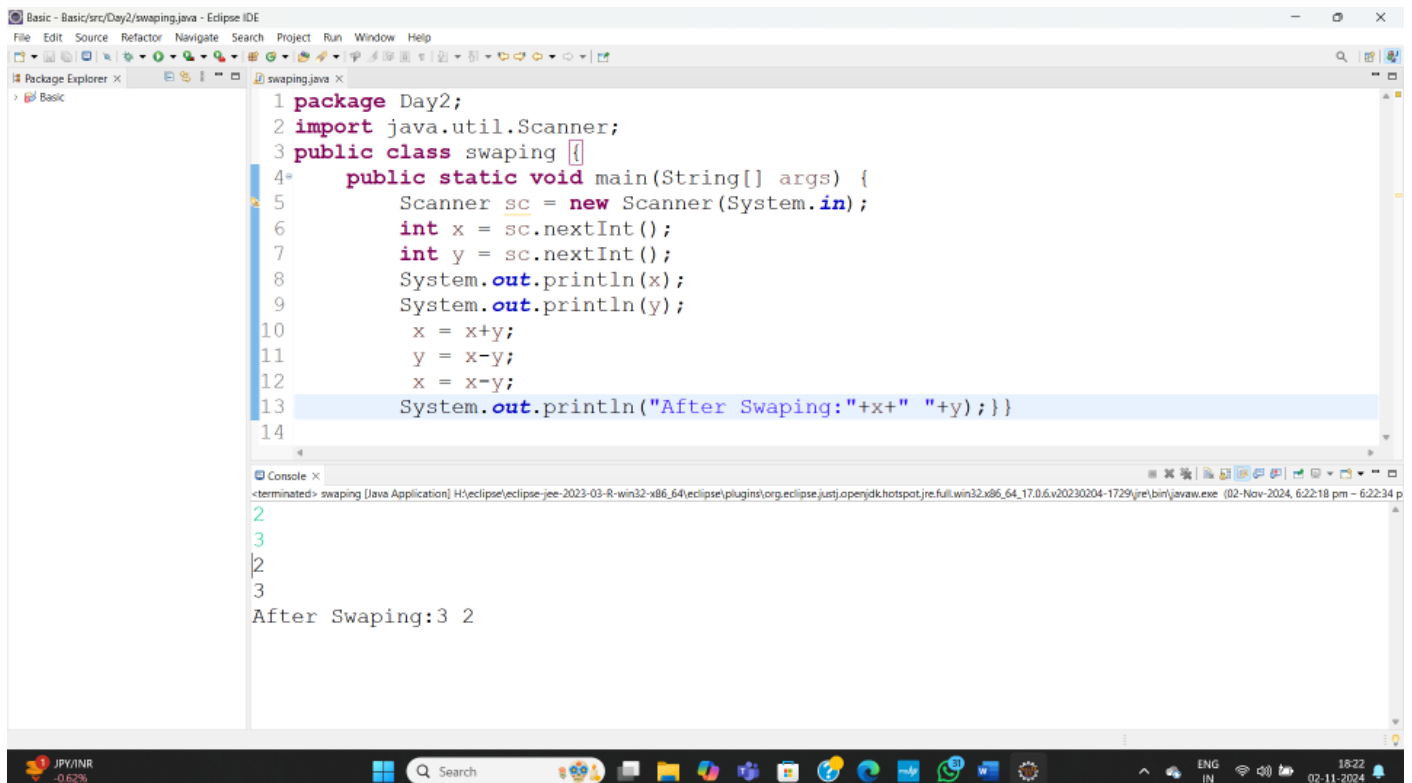


```
1 package Assignment_1;
2 import java.util.Scanner;
3 public class Swap {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6         System.out.print("Enter the first number a: ");
7         int a = sc.nextInt();
8         System.out.print("Enter the second number b: ");
9         int b = sc.nextInt();
10        System.out.println("Before swapping: a = " + a + ", b = " + b);
11        int temp = a;
12        a = b;
13        b = temp;
14        System.out.println("After swapping: a = " + a + ", b = " + b);
15    }
16 }
17
18
```

Console Output:

```
<terminated> Swap [Java Application] H:\eclipse\ eclipse-jee-2023-03-R-win32-x86_64\ eclipse\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_17.0.6.v20230204-1729\jre\bin\java.exe (02-Nov-2024, 6:13:52 pm - 6:14:02 pm)
Enter the first number a: 4
Enter the second number b: 7
Before swapping: a = 4, b = 7
After swapping: a = 7, b = 4
```

# Swapping without Third variable



```
1 package Day2;
2 import java.util.Scanner;
3 public class swapping {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6         int x = sc.nextInt();
7         int y = sc.nextInt();
8         System.out.println(x);
9         System.out.println(y);
10        x = x+y;
11        y = x-y;
12        x = x-y;
13        System.out.println("After Swaping:"+x+" "+y);
14    }
15 }
16
```

Console Output:

```
<terminated> swapping [Java Application] H:\eclipse\ eclipse-jee-2023-03-R-win32-x86_64\ eclipse\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_17.0.6.v20230204-1729\jre\bin\java.exe (02-Nov-2024, 6:22:18 pm - 6:22:34 p
2
3
2
3
After Swaping:3 2
```

# To Find the largest number in given numbers

```
1 package Assignment_1;
2 import java.util.Scanner;
3 public class LargestNum {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6         System.out.print("Enter the first number: ");
7         int num1 = sc.nextInt();
8         System.out.print("Enter the second number: ");
9         int num2 = sc.nextInt();
10        System.out.print("Enter the third number: ");
11        int num3 = sc.nextInt();
12        int largest;
13        if (num1 >= num2 && num1 >= num3) {
14            largest = num1;
15        } else if (num2 >= num1 && num2 >= num3) {
16            largest = num2;
17        } else {
18            largest = num3;
19        }
20        System.out.println("The largest number is: " + largest);
21    }
22 }
23
24
25
```

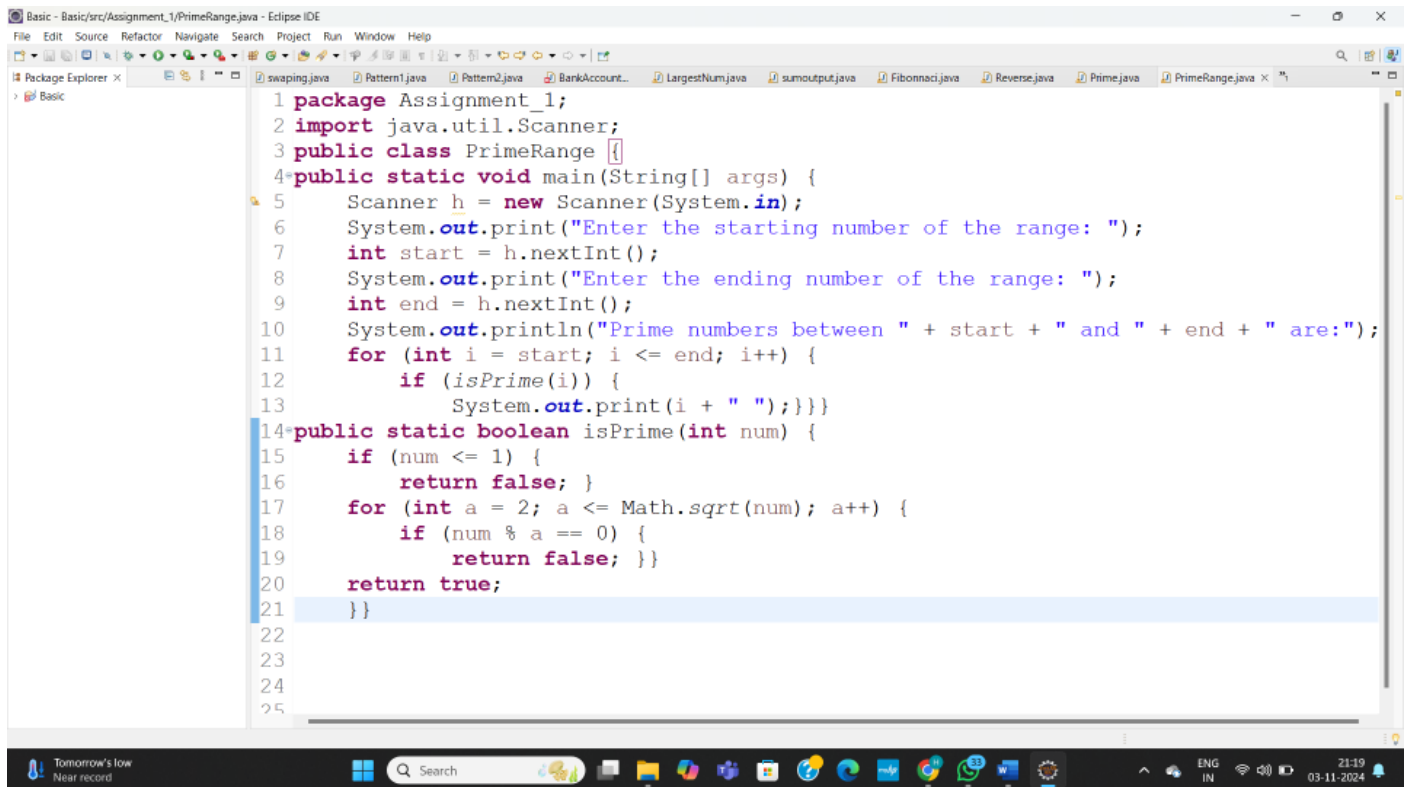
```
1 package Assignment_1;
2 import java.util.Scanner;
3 public class LargestNum {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6         System.out.print("Enter the first number: ");
7         int num1 = sc.nextInt();
8         System.out.print("Enter the second number: ");
9         int num2 = sc.nextInt();
10        System.out.print("Enter the third number: ");
11        int num3 = sc.nextInt();
12        int largest;
13        if (num1 >= num2 && num1 >= num3) {
14            largest = num1;
15        } else if (num2 >= num1 && num2 >= num3) {
16            largest = num2;
17        } else {
18            largest = num3;
19        }
20        System.out.println("The largest number is: " + largest);
21    }
22 }
23
24
25
```

Console Output:

```
<terminated> LargestNum [Java Application] H:\eclipse\ eclipse-jee-2023-03-R-win32-x86_64\eclipse\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64.17.0.6.v20230204-1729\jre\bin\javaw.exe (03-Nov-2024, 8:58:07 pm - 8:58:33 pm)
Enter the first number: 100
Enter the second number: 30
Enter the third number: 50
The largest number is: 100
```

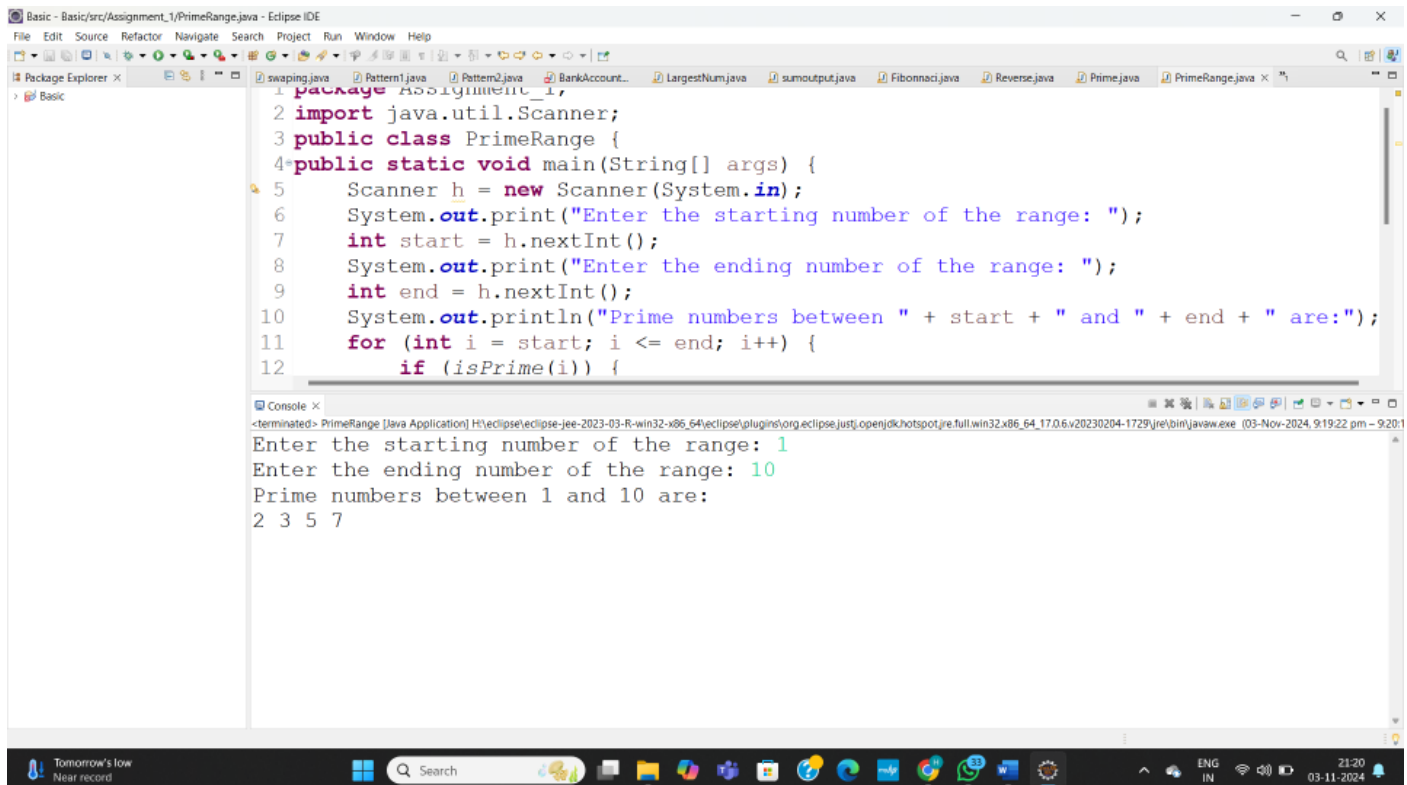


# To Print prime Number in 1 to 10



The screenshot shows the Eclipse IDE with the file 'Basic - Basic/src/Assignment\_1/PrimeRange.java' open. The code is as follows:

```
1 package Assignment_1;
2 import java.util.Scanner;
3 public class PrimeRange {
4     public static void main(String[] args) {
5         Scanner h = new Scanner(System.in);
6         System.out.print("Enter the starting number of the range: ");
7         int start = h.nextInt();
8         System.out.print("Enter the ending number of the range: ");
9         int end = h.nextInt();
10        System.out.println("Prime numbers between " + start + " and " + end + " are:");
11        for (int i = start; i <= end; i++) {
12            if (isPrime(i)) {
13                System.out.print(i + " ");
14            }
15        }
16    }
17    public static boolean isPrime(int num) {
18        if (num <= 1) {
19            return false;
20        }
21        for (int a = 2; a <= Math.sqrt(num); a++) {
22            if (num % a == 0) {
23                return false;
24            }
25        }
26        return true;
27    }
28 }
```

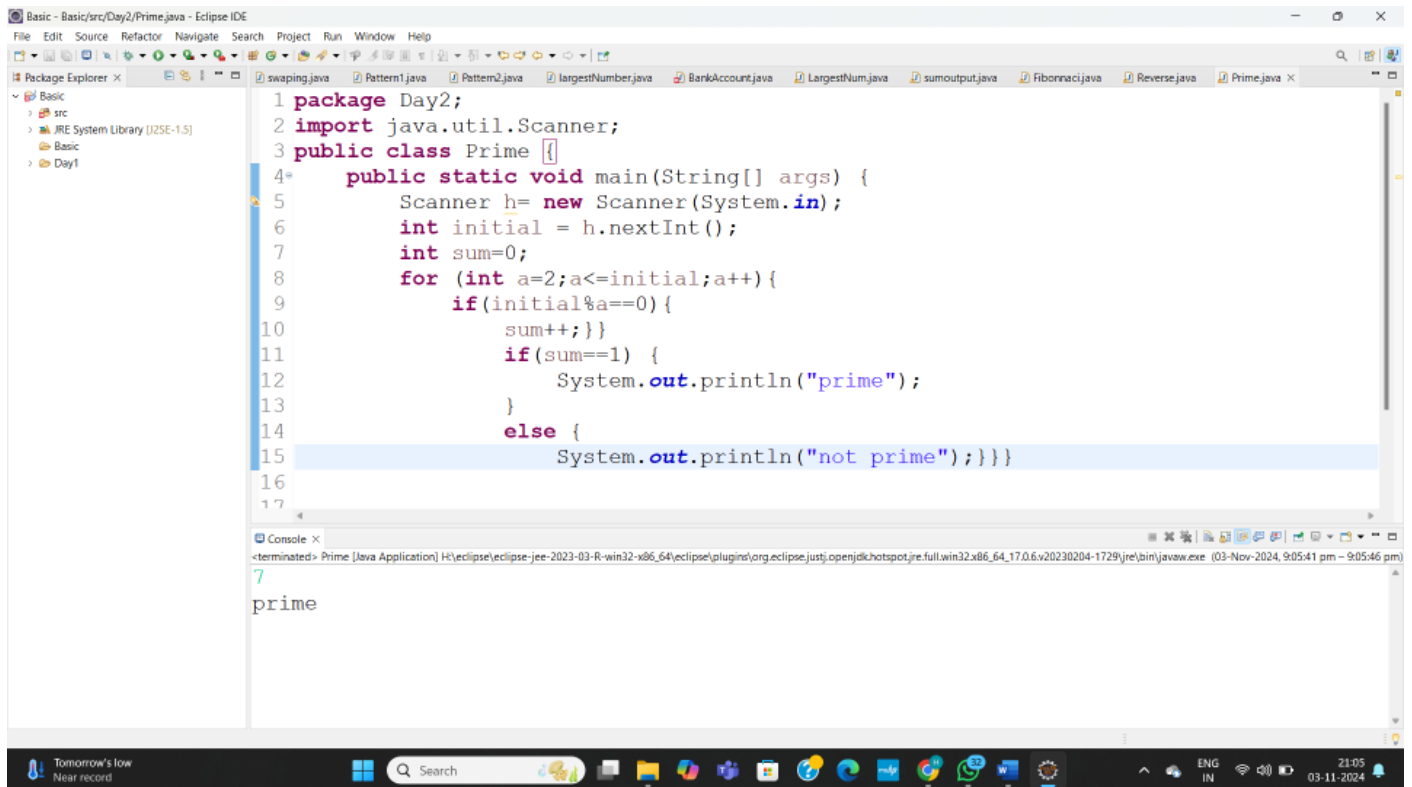


The screenshot shows the Eclipse IDE with the same file 'Basic - Basic/src/Assignment\_1/PrimeRange.java' open. The code is the same as in the previous screenshot. Below the code editor, the Console window is visible, showing the output of the program:

```
<terminated> PrimeRange [Java Application] H:\eclipse\workspace\jee-2023-03-R-win32-x86_64\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64.17.0.6.v20230204-1729\jre\bin\javaw.exe (03-Nov-2024, 9:19:22 pm - 9:20:1
Enter the starting number of the range: 1
Enter the ending number of the range: 10
Prime numbers between 1 and 10 are:
2 3 5 7
```



## To check given Number is Prime or Not

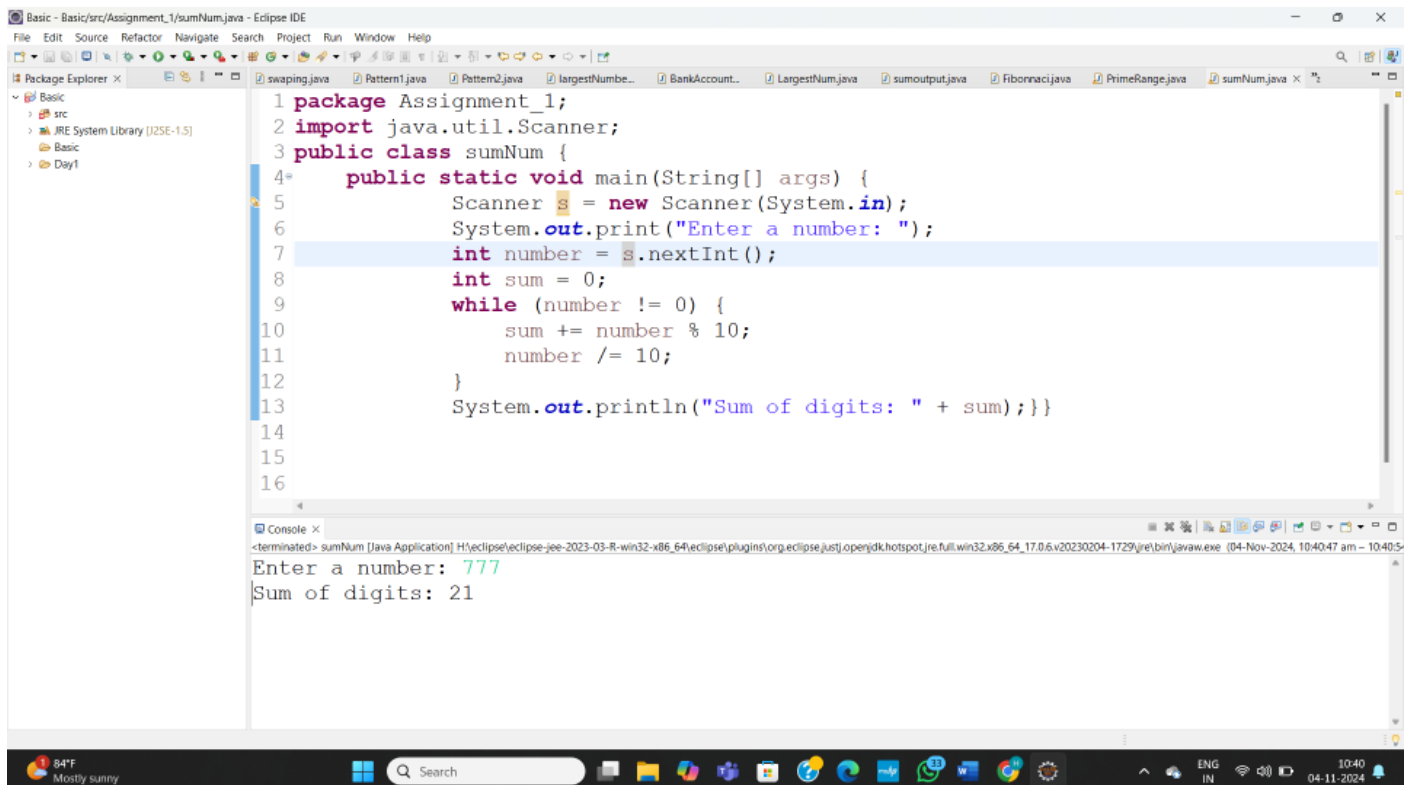


```
1 package Day2;
2 import java.util.Scanner;
3 public class Prime {
4     public static void main(String[] args) {
5         Scanner h= new Scanner(System.in);
6         int initial = h.nextInt();
7         int sum=0;
8         for (int a=2;a<=initial;a++){
9             if(initial%a==0){
10                 sum++;}}
11         if(sum==1) {
12             System.out.println("prime");
13         }
14         else {
15             System.out.println("not prime");}}
16
17
```

Console Output:

```
<terminated> Prime [Java Application] H:\eclipse\ eclipse-jee-2023-03-R-win32-x86_64\eclipse\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64.17.0.6.v20230204-1729\jre\bin\javaw.exe (03-Nov-2024, 9:05:41 pm - 9:05:46 pm)
7
prime
```

## Sum of Given Numbers

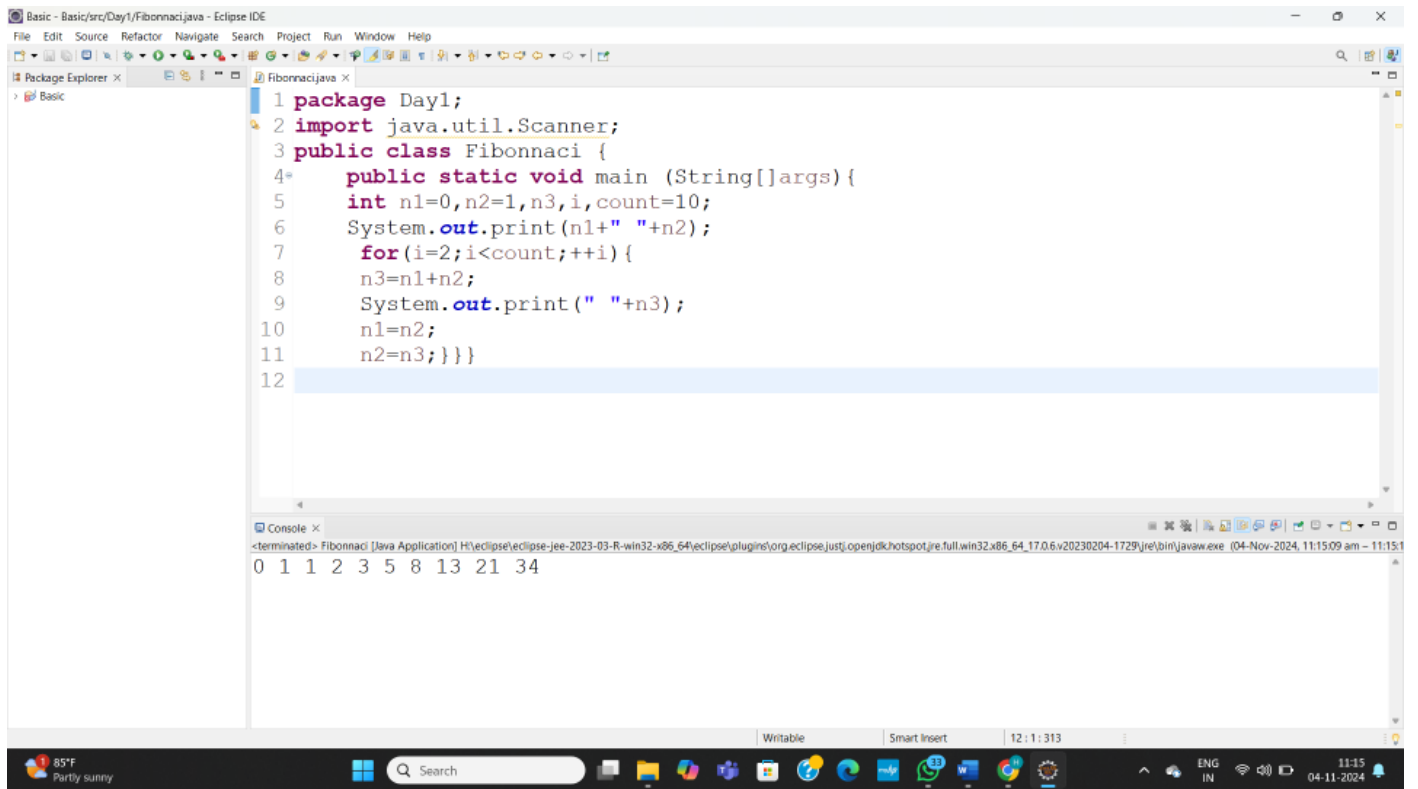


```
1 package Assignment_1;
2 import java.util.Scanner;
3 public class sumNum {
4     public static void main(String[] args) {
5         Scanner s = new Scanner(System.in);
6         System.out.print("Enter a number: ");
7         int number = s.nextInt();
8         int sum = 0;
9         while (number != 0) {
10             sum += number % 10;
11             number /= 10;
12         }
13         System.out.println("Sum of digits: " + sum);}}
14
15
16
```

Console Output:

```
<terminated> sumNum [Java Application] H:\eclipse\ eclipse-jee-2023-03-R-win32-x86_64\eclipse\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64.17.0.6.v20230204-1729\jre\bin\javaw.exe (04-Nov-2024, 10:40:47 am - 10:40:54 am)
Enter a number: 777
Sum of digits: 21
```

# Fibonacci Series



The screenshot shows the Eclipse IDE interface. The main editor window displays a Java file named `Fibonacci.java` with the following code:

```
1 package Day1;
2 import java.util.Scanner;
3 public class Fibonnaci {
4     public static void main (String[]args){
5         int n1=0,n2=1,n3,i,count=10;
6         System.out.print(n1+" "+n2);
7         for(i=2;i<count;++i){
8             n3=n1+n2;
9             System.out.print(" "+n3);
10            n1=n2;
11            n2=n3;}}}
```

The console window at the bottom shows the output of the program:

```
<terminated> Fibonnaci [Java Application] H:\eclipse\ eclipse-jee-2023-03-R-win32-x86_64\eclipse\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_17.0.6.v20230204-1729\jre\bin\javaw.exe (04-Nov-2024, 11:15:09 am - 11:15:11 am)
0 1 1 2 3 5 8 13 21 34
```

The Windows taskbar at the bottom shows the system clock as 11:15 on 04-11-2024, and the weather as 85°F Partly sunny.