//1.Write a program to check whether a person is eligible to vote (age ≥ 18).
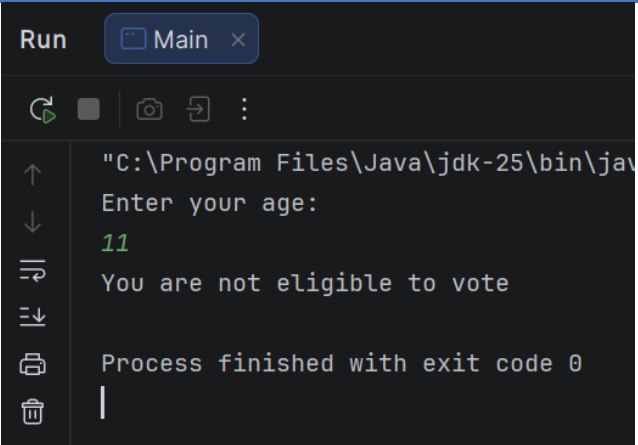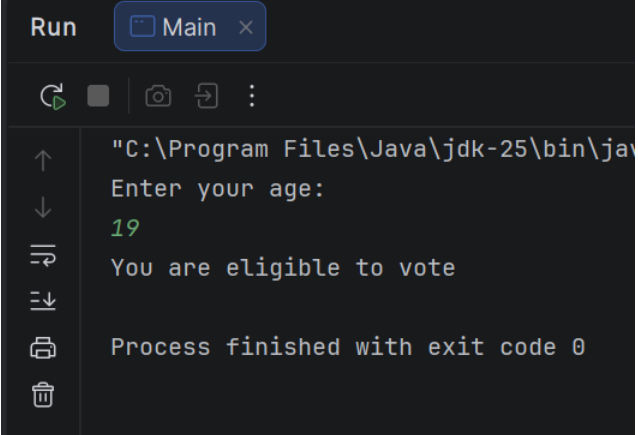
```java
import java.util.Scanner;

public class Main{
    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);

        System.out.println("Enter your age: ");
        int age = sc.nextInt();

        if (age < 18) {
            System.out.println("You are not eligible to vote");
        } else if (age >= 18) {
            System.out.println("You are eligible to vote");
        }

        sc.close();
    }
}
```

Sample Input	Sample Output
11	Run Main × "C:\Program Files\Java\jdk-25\bin\jav Enter your age: 11 You are not eligible to vote Process finished with exit code 0
19	Run Main × "C:\Program Files\Java\jdk-25\bin\jav Enter your age: 19 You are eligible to vote Process finished with exit code 0

```java
//2. Write a program to assign grades based on marks:
//80–100 → A, 70–79 → B, 60–69 → C, Below 60 → Fail

import java.util.Scanner;

public class Main {
    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter your number: ");
        int number = sc.nextInt();

        if(number >= 80 && number <= 100){
            System.out.println("Grade: A");
        } else if(number >= 70 && number <= 79){
            System.out.println("Grade: B");
        } else if(number >= 60 && number <= 69){
            System.out.println("Grade: C");
        } else if(number <= 59){
            System.out.println("Grade: Fail");
        } else{
            System.out.println("Wrong number");
        }

        sc.close();
    }
}
```

Sample Input	Sample Output
75	Run Main × "C:\Program Files\Java\jdk-25\bin\ja Enter your number: 75 Grade: B Process finished with exit code 0
10	Run Main × "C:\Program Files\Java\jdk-25\bin\ja Enter your number: 10 Grade: Fail Process finished with exit code 0

```java
//Write a Java program to take a number n: If n is even, print 0; If n is odd, print the sum of digits of n
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter a number: ");
        int n = sc.nextInt();

        if (n == 1) {
            System.out.println("Odd");
        } else if (n % 2 == 0) {
            System.out.println(0);
        } else {
            System.out.println("Odd");
        }

    }
}
```

Sample Input	Sample Output
10	
121	

//4. Find the max and min of 3 numbers.
// a. Inside main, declare 3 integer variables and assign 3 different values.
// b. Implement the logic to find the max and min of those 3 values and print the values.

```java
public class Main {
   public static void main(String[] args){
      int a = 10;
      int b = 90;
      int c = 30;

      if(a > b && a > c){
         System.out.println("Max of this 3 number is: " +a);
      } else if (b > a && b > c) {
         System.out.println("Max of this 3 number is: " +b);
      }else{
         System.out.println("Max of this 3 number is: " +c);
      }
   }
}
```

Sample Input	Sample Output
	Run Main × "C:\Program Files\Java\jdk-25\bin\java.e Max of this 3 number is: 90 Process finished with exit code 0

```java
//5. Write a Java program to find the summation and average of 3 integer values.

import java.util.Scanner;

public class Main {
    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Input three numbers: ");
        float num1 = sc.nextInt();
        float num2 = sc.nextInt();
        float num3 = sc.nextInt();

        float sum = num1 + num2 + num3;
        System.out.println("Summation is = " +sum);

        float avg = sum / 3;
        System.out.println("Average is = " +avg);

        sc.close();
    }
}
```

Sample Input	Sample Output
5 10 15	Run Main ✕ "C:\Program Files\Java\jdk-25\bin\jav Input three numbers: 5 10 15 Summation is = 30.0 Average is = 10.0 Process finished with exit code 0
45 89 62	Run Main ✕ "C:\Program Files\Java\jdk-25\bin\java Input three numbers: 45 89 62 Summation is = 196.0 Average is = 65.333336 Process finished with exit code 0

```java
//6. Find the factorial of a given number.

public class Main {
    public static void main(String[] args){
        int num = 5;
        int fact = 1;

        for(int i = 1; i <= num; i++){
            fact *= i;
        }
        System.out.println("Factorial = " +fact);
    }
}
```

Sample Input	Sample Output
	Run □ Main ×
	"C:\Program Files\Java\jdk-25\bin\ja
	Factorial = 120
	Process finished with exit code 0

//7. Print all numbers between 1 and n that are divisible by 3 and 5.

```java
import java.util.Scanner;

public class Main {
    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();

        for(int i = 1; i <= n; i++){
            if(i % 3 == 0 || i % 5 == 0){
                System.out.println(i);
            }
        }

        sc.close();
    }
}
```

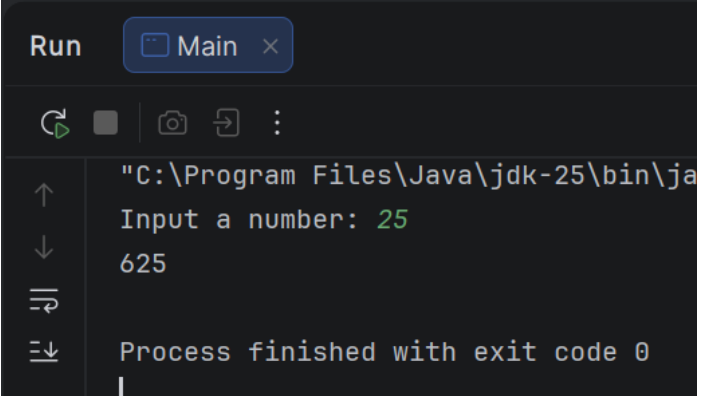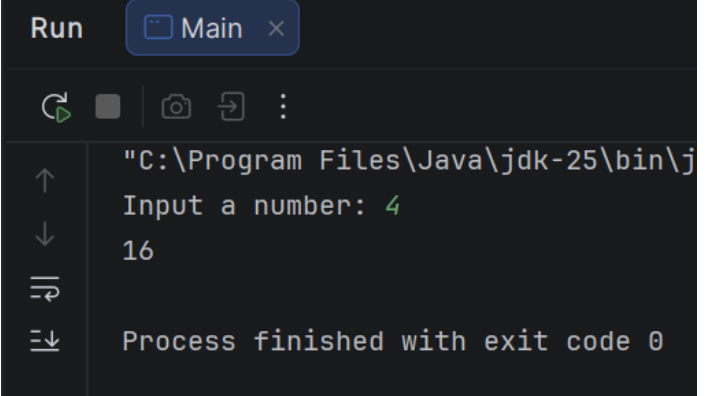| Sample Input	Sample Output
20	Run ☐ Main ✕ "C:\Program Files\Java\jdk-25\bin\j 20 3 5 6 9 10 12 15 18 20 Process finished with exit code 0
5	Run ☐ Main ✕ "C:\Program Files\Java\jdk-25\bin\ja 5 3 5 Process finished with exit code 0

Lab 2 Classwork Tasks

//1. Write a Java application that will prompt the user to provide a number as input.
// Read input as a number and display the square of the number.

```java
import java.util.Scanner;

public class Main {
    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);
        System.out.print("Input a number: ");
        long n = sc.nextInt();

        System.out.println(n*n);

        sc.close();
    }
}
```

Sample Input	Sample Output
25	Run ☐ Main ✕ "C:\Program Files\Java\jdk-25\bin\ja Input a number: 25 625 Process finished with exit code 0
4	Run ☐ Main ✕ "C:\Program Files\Java\jdk-25\bin\j Input a number: 4 16 Process finished with exit code 0

//2. Write a java program that will prompt the user to provide a number as input. Read input
//as a number and display whether the number is even or odd.

```java
import java.util.Scanner;

public class Main{
    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();

        if(n % 2 == 0){
            System.out.println("Even");
        }else{
            System.out.println("Odd");
        }

        sc.close();
    }
}
```

Sample Input	Sample Output
25	Build Run ☐ Main × "C:\Program Files\Java\jdk-25\bin\j 25 Odd Process finished with exit code 0
50	Run ☐ Main × "C:\Program Files\Java\jdk-25\bin\ja 50 Even Process finished with exit code 0

```java
//3. Write a java program to determine whether a given number is prime or not.

import java.util.Scanner;

public class Main {
    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();
        boolean isPrime = true;

        for(int i = 2; i < n; i++){
            if(n % i == 0){
                isPrime = false;
                break;
            }
        }
        if(isPrime == true){
            System.out.println("Given number is Prime");
        }else{
            System.out.println("Given number is Not Prime");
        }

        sc.close();
    }
}
```

Sample Input	Sample Output
57	
7	

```java
//4. Write a program that will take an integer number, and print the day of the week
//depending on the number. To find the day of the week, you need to divide the number
//by 7 and find the remainder. The day will have the following value depending on the
//remainder.

import java.util.Scanner;

public class Main {
    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();

        switch(n){
            case 0:
                System.out.println("Saturday");
                break;
            case 1:
                System.out.println("Sunday");
                break;
            case 2:
                System.out.println("Monday");
                break;
            case 3:
                System.out.println("Tuesday");
                break;
            case 4:
                System.out.println("Wednesday");
                break;
            case 5:
                System.out.println("Thursday");
                break;
            case 6:
                System.out.println("Friday");
                break;
            default:
                System.out.println("Unknown");
        }

        sc.close();
    }
}
```

Sample Input	Sample Output
5	

Build
Run   Main ×

"C:\Program Files\Java\jdk-25\bin\ja
5
Thursday

Process finished with exit code 0

```java
//5. Write a program that will take two integer numbers from user, and print the LCM of those
//numbers.

import java.util.Scanner;

public class Main{
   public static void main(String[] args){
      Scanner sc = new Scanner(System.in);

      System.out.println("Enter the first number: ");
      int num1 = sc.nextInt();

      System.out.println("Enter the second number: ");
      int num2 = sc.nextInt();

      int max = (num1 > num2) ? num1 : num2;
      int lcm = max;

      for(int i = max; ;i++){
        if(i % num1 == 0 && i % num2 == 0){
           lcm = i;
           break;
        }
      }

      System.out.println("LCM Is = " +lcm);

      sc.close();

   }
}
```

Sample Input	Sample Output
15 20	

Sample Output content:

Run   ▢ Main ✕

"C:\Program Files\Java\jdk-25\bin\j
Enter the first number:
15
Enter the second number:
20
LCM Is = 60

Process finished with exit code 0

```java
//6. Write a Java program that will take 10 numbers from user and only print the numbers
//(among those 10 numbers) that are divisible by 3 or 5 but not both.

import java.util.Scanner;

public class Main{
    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);
        int[] arr = new int[10];

        for(int i = 0; i < 10; i++){
            arr[i] = sc.nextInt();
        }

        for(int i = 0; i < 10; i++){
            if((arr[i] % 3 == 0 || arr[i] % 5 == 0) && !(arr[i] % 3 == 0 && arr[i] % 5 == 0)){
                System.out.println(arr[i]);
            }
        }

        sc.close();
    }
}
```

Sample Input	Sample Output
15 5 3 7 8 9 12 99 121 698	Run Main ✕ "C:\Program Files\Java\jdk-25\bin\jav 15 5 3 7 8 9 12 99 121 698 5 3 9 12 99 Process finished with exit code 0

//7. Write a program in java to display the summation of the even digits of a number.

```java
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();

        int sum = 0;
        int digit;

        while (n > 0) {
            digit = n % 10;

            if (digit % 2 == 0) {
                sum += digit;
            }

            n = n / 10;
        }

        System.out.println(sum);
    }
}
```

Sample Input	Sample Output
25468731	Run Main × "C:\Program Files\Java\jdk-25\bin\ja 25468731 20 Process finished with exit code 0
12345	Run Main × "C:\Program Files\Java\jdk-25\bin\ja 12345 6 Process finished with exit code 0

//2.8. Write a java program to print the Fibonacci series up to n th item. The value of n will be provided by the user as input

```java
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();
        int a = 1, b = 1;

        for (int i = 1; i <= n; i++) {
            System.out.print(a);

            if (i < n) {
                System.out.print(", ");
            }

            int next = a + b;
            a = b;
            b = next;
        }

        sc.close();
    }
}
```

Sample Input	Sample Output
9	Run ⬜ Main ✕ "C:\Program Files\Java\jdk-25\bin\java 9 1, 1, 2, 3, 5, 8, 13, 21, 34 Process finished with exit code 0
2	Run ⬜ Main ✕ "C:\Program Files\Java\jdk-25\bin\j 2 1, 1 Process finished with exit code 0