Step-by-Step Java Learning Guide with Programs

📑 ☐ Before Starting

- Install **Java JDK** and **BlueJ**.
- Open BlueJ → **New Project** → **New Class**.
- Delete everything in the class.
- Type your code inside `public class ClassName { public static void main(String[] args) { … } }`
- **Compile → Run → See Output**

☞ If you see red errors → read the message, correct spelling, or missing ;

🗓 Week 1 – Getting Started

Program 1: Hello Java

```
public class Hello {
    public static void main(String[] args) {
        System.out.println("Hello, Java!");
    }
}
```

💡 *Explains how to print text.*

Program 2: Print Your Name

```
public class MyName {
    public static void main(String[] args) {
        System.out.println("My name is Rahul");
    }
}
```

💡 *Change "Rahul" to your own name.*

Program 3: Print Bio-Data

```java
public class BioData {
    public static void main(String[] args) {
        System.out.println("Name: Rahul Kumar");
        System.out.println("Father's Name: Rajesh Kumar");
        System.out.println("Address: Dhanbad, Jharkhand");
        System.out.println("Contact: 9876543210");
    }
}
```

💡 *Shows multiple lines of output.*

🗓 Week 2 – Arithmetic Basics

Program 4: Add Two Numbers

```java
public class Add {
    public static void main(String[] args) {
        int a = 10, b = 20;
        int sum = a + b;
        System.out.println("Sum = " + sum);
    }
}
```

Program 5: Subtract Two Numbers

```java
public class Subtract {
    public static void main(String[] args) {
        int a = 50, b = 20;
        int diff = a - b;
        System.out.println("Difference = " + diff);
    }
}
```

Program 6: Multiply Two Numbers

```java
public class Multiply {
    public static void main(String[] args) {
        int a = 7, b = 8;
        int product = a * b;
        System.out.println("Product = " + product);
    }
}
```

Program 7: Divide Two Numbers

```java
public class Divide {
    public static void main(String[] args) {
```

```
        int a = 40, b = 5;
        int result = a / b;
        System.out.println("Quotient = " + result);
    }
}
```

Program 8: Remainder of Division

```
public class Remainder {
    public static void main(String[] args) {
        int a = 43, b = 5;
        int rem = a % b;
        System.out.println("Remainder = " + rem);
    }
}
```

🖩 Week 3 – Numbers

Program 9: Double a Number

```
public class DoubleNumber {
    public static void main(String[] args) {
        int n = 12;
        int result = n * 2;
        System.out.println("Double = " + result);
    }
}
```

Program 10: Square of a Number

```
public class Square {
    public static void main(String[] args) {
        int n = 6;
        int result = n * n;
        System.out.println("Square = " + result);
    }
}
```

Program 11: Cube of a Number

```
public class Cube {
    public static void main(String[] args) {
        int n = 4;
        int result = n * n * n;
        System.out.println("Cube = " + result);
    }
}
```

Program 12: Swap Two Numbers

```java
public class Swap {
    public static void main(String[] args) {
        int a = 5, b = 10;
        System.out.println("Before Swap: a=" + a + ", b=" + b);
        int temp = a;
        a = b;
        b = temp;
        System.out.println("After Swap: a=" + a + ", b=" + b);
    }
}
```

🎞 Week 4 – Area and Perimeter

Program 13: Area of Rectangle

```java
public class RectangleArea {
    public static void main(String[] args) {
        int length = 10, breadth = 5;
        int area = length * breadth;
        System.out.println("Area of Rectangle = " + area);
    }
}
```

Program 14: Area of Square

```java
public class SquareArea {
    public static void main(String[] args) {
        int side = 6;
        int area = side * side;
        System.out.println("Area of Square = " + area);
    }
}
```

Program 15: Area of Circle

```java
public class CircleArea {
    public static void main(String[] args) {
        double radius = 7;
        double area = 3.14 * radius * radius;
        System.out.println("Area of Circle = " + area);
    }
}
```

Program 16: Perimeter of Rectangle

```java
public class RectanglePerimeter {
```

```
    public static void main(String[] args) {
        int length = 10, breadth = 5;
        int perimeter = 2 * (length + breadth);
        System.out.println("Perimeter of Rectangle = " + perimeter);
    }
}
```

Program 17: Perimeter of Square

```
public class SquarePerimeter {
    public static void main(String[] args) {
        int side = 6;
        int perimeter = 4 * side;
        System.out.println("Perimeter of Square = " + perimeter);
    }
}
```

🏢 Week 5 – Small Applications

Program 18: Simple Interest

```
public class SimpleInterest {
    public static void main(String[] args) {
        double p = 5000, r = 6, t = 2;
        double si = (p * r * t) / 100;
        System.out.println("Simple Interest = " + si);
    }
}
```

Program 19: Average of Three Numbers

```
public class Average {
    public static void main(String[] args) {
        int a = 10, b = 20, c = 30;
        int avg = (a + b + c) / 3;
        System.out.println("Average = " + avg);
    }
}
```

🏢 Week 6 – Decision Making

Program 20: Largest of Two Numbers

```
public class Largest {
    public static void main(String[] args) {
        int a = 25, b = 40;
        if (a > b) {
```

```
            System.out.println("Largest = " + a);
        } else {
            System.out.println("Largest = " + b);
        }
    }
}
```

Program 21 (Bonus): Even or Odd

```java
public class EvenOdd {
    public static void main(String[] args) {
        int n = 7;
        if (n % 2 == 0) {
            System.out.println(n + " is Even");
        } else {
            System.out.println(n + " is Odd");
        }
    }
}
```

✓ Now you have **20 programs (actually 21 with bonus)** with step-by-step plan.