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Exercise 1: Create a class with a method which can calculate the sum of first n natural numbers which are divisible by 3 or 5.

```
public class Task1 {
	public static int calculateSum (int n) {
		int sum = 0;
		for (int i = 1; i <= n; i++) {
			if (i % 3 == 0 || i % 5 == 0) {
				sum += i;
			}
		}
		return sum;
	}

	public static void main(String[] args) {
		 int n = 15;
		System.out.println(calculateSum(n));
	}
}
```

Exercise 2: Create a class with a method to find the difference between the sum of the squares and the square of the sum of the first n natural numbers.

```
public class task2 {
   public int calculateDifference(int n) {
      int sumOfSquares = 0;
      int sum = 0;

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

```
            sumOfSquares += i * i;
            sum += i;
        }

        int squareOfSum = sum * sum;

        return squareOfSum - sumOfSquares;
    }

    public static void main(String[] args) {
        int n = 10;
        task2 calculator = new task2();
        System.out.println("The difference is: " + calculator.calculateDifference(n));
    }
}
```

Exercise 3: Create a method to check if a number is an increasing number

```
public class task3 {
    public boolean checkNumber(int number) {
        String numStr = Integer.toString(number);

        for (int i = 0; i < numStr.length() - 1; i++) {
            if (numStr.charAt(i) > numStr.charAt(i + 1)) {
                return false;
            }
        }
```

```
        return true;
    }

    public static void main(String[] args) {
        // Example usage
        task3 task = new task3();
        int number = 134468;
        System.out.println("The number " + number + " is increasing: " +
task.checkNumber(number));
    }
}
```

Exercise 4: Create a method to check if a number is a power of two or not

```
public class task4 {
    public boolean checkNumber(int n) {
        if (n <= 0) {
            return false;
        }

        return (n & (n - 1)) == 0;
    }

    public static void main(String[] args) {
        task4 task = new task4();
        int number = 8;
        System.out.println("The number " + number + " is a power of two: " +
task.checkNumber(number));
    }
}
```

Exercise 5:Take Employee Info like empid, empname, empsal, empAdd, empGender, empEmail and display .

```
public class task5 {
   private int empId;
   private String empName;
   private double empSal;
   private String empAdd;
   private String empGender;
   private String empEmail;

   public task5(int empId, String empName, double empSal, String empAdd, String empGender, String empEmail) {
      this.empId = empId;
      this.empName = empName;
      this.empSal = empSal;
      this.empAdd = empAdd;
      this.empGender = empGender;
      this.empEmail = empEmail;
   }

   public void display() {
      System.out.println("Employee ID: " + empId);
      System.out.println("Employee Name: " + empName);
      System.out.println("Employee Salary: " + empSal);
      System.out.println("Employee Address: " + empAdd);
      System.out.println("Employee Gender: " + empGender);
      System.out.println("Employee Email: " + empEmail);
   }
```

```
  public static void main(String[] args) {
    task5 emp = new task5(200, "rose", 7000, "Hyderabad", "Female",
"rose@gmail.com");
    emp.display();
  }
}
```

Exercise 6: Write a Java program to print the sum (addition), multiply, subtract, divide and remainder of two numbers.

```
public class task6 {
  public static void main(String[] args) {
    Scanner scanner = new Scanner(System.in);

    System.out.print("Input first number: ");
    int num1 = scanner.nextInt();

    System.out.print("Input second number: ");
    int num2 = scanner.nextInt();

    int sum = num1 + num2;
    int difference = num1 - num2;
    int product = num1 * num2;
    int quotient = num1 / num2;
    int remainder = num1 % num2;

    System.out.println(num1 + " + " + num2 + " = " + sum);
    System.out.println(num1 + " - " + num2 + " = " + difference);
    System.out.println(num1 + " x " + num2 + " = " + product);
```

```
        System.out.println(num1 + " / " + num2 + " = " + quotient);
        System.out.println(num1 + "  " + num2 + " = " + remainder);

        scanner.close();
    }
}
```

Exercise 7: Write a Java method to find the smallest number among three numbers.

```
public class task7 {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        System.out.print("Input the first number: ");
        int num1 = scanner.nextInt();

        System.out.print("Input the second number: ");
        int num2 = scanner.nextInt();

        System.out.print("Input the third number: ");
        int num3 = scanner.nextInt();

        int smallest = findSmallest(num1, num2, num3);

        System.out.println("The smallest value is " + smallest);

        scanner.close();
```

```
    }

    public static int findSmallest(int num1, int num2, int num3) {
        return Math.min(num1, Math.min(num2, num3));
    }
}
```

Exercise 8: Write a Java method to compute the average of three numbers.

```
public class task8 {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Input the first number: ");
        int num1 = scanner.nextInt();
        System.out.print("Input the second number: ");
        int num2 = scanner.nextInt();
        System.out.print("Input the third number: ");
        int num3 = scanner.nextInt();
        double average = computeAverage(num1, num2, num3);
        System.out.println("The average value is " + average);
        scanner.close();
    }
    public static double computeAverage(int num1, int num2, int num3) {
        return (num1 + num2 + num3) / 3.0;
    }
}
```