

WEEK – 11

Q. Write a C/Java/Python Program to classify the types of Cohesion?

```
public class CohesionExample {

    // Functional Cohesion
    public static int calculateSum(int[] array) {
        int sum = 0;
        for (int num : array) {
            sum += num;
        }
        return sum;
    }

    // Sequential Cohesion
    public static void processData(int[] data) {
        int sum = calculateSum(data);
        System.out.println("Sum of data: " + sum);
        // Additional processing steps...
    }

    // Communicational Cohesion
```

```
public static void processDataV2(int[] data) {  
    int average = calculateAverage(data);  
    System.out.println("Average of data: " + average);  
    // Additional processing steps...  
}
```

```
private static int calculateAverage(int[] array) {  
    int sum = 0;  
    for (int num : array) {  
        sum += num;  
    }  
    return sum / array.length;  
}
```

// Procedural Cohesion

```
public static void processOrder(String order) {  
    validateOrder(order);  
    System.out.println("Processing order: " + order);  
    // Additional processing steps...  
}
```

```
private static void validateOrder(String order) {  
    // Validation logic...  
}
```

// Temporal Cohesion

```
public static void handleEvent(String event) {  
    if (event.equals("click")) {  
        handleClickEvent();  
    } else if (event.equals("keyPress")) {  
        handleKeyPressEvent();  
    }  
}
```

```
private static void handleClickEvent() {  
    System.out.println("Handling click event...");  
}
```

```
private static void handleKeyPressEvent() {  
    System.out.println("Handling key press event...");  
}
```

// Logical Cohesion

```
public static void processCustomerData(String customerData) {  
    validateCustomerData(customerData);  
    System.out.println("Processing customer data: " + customerData);  
    // Additional processing steps...  
}
```

```
private static void validateCustomerData(String customerData) {
```

```
// Validation logic...
}

// Coincidental Cohesion
public static void doSomething() {
    // Code that does something unrelated...
}

public static void doSomethingElse() {
    // Code that does something else unrelated...
}

public static void main(String[] args) {
    int[] array = {1, 2, 3, 4, 5};
    processData(array);
    processDataV2(array);
    String order = "Sample Order";
    processOrder(order);
    String event = "click";
    handleEvent(event);
    String customerData = "Sample Customer Data";
    processCustomerData(customerData);
    doSomething();
    doSomethingElse();
}
```

