Matric No.: 23CD010171
Reg No.: 2300141
Course Code: COS 201

Question One

```
public class NigeriaFlag {
    public static void main(String[] args) {
        for (int i = 0; i < 4; i++) {
            for (int j = 0; j < 12; j++) {
                if (j < 4) {
                    System.out.print("G ");
                } else if (j < 8) {
                    System.out.print("W ");
                } else {
                    System.out.print("G ");
                }
            }
            System.out.println(\n);
        }
    }
}
```

```
public class NigeriaFlag {
    public static void main(String[] args) {
        for (int i = 0; i < 4; i++) {
            for (int j = 0; j < 12; j++) {
                if (j < 4) {
                    System.out.print("G ");
                } else if (j < 8) {
                    System.out.print("W ");
                } else {
                    System.out.print("G ");
                }
            }
            System.out.println(\n);
        }
    }
}
```

Question Two

```
public class AmericanFlag {
	public static void main(String[] args) {
		for (int i = 0; i < 6; i++) {
			if (i < 3) {
				for (int j = 0; j < 11; j++) {
					if (j < 5) {
						System.out.print("* ");
					} else {
						System.out.print("= ");
					}
				}
			} else {
				for (int j = 0; j < 11; j++) {
					System.out.print("= ");
				}
			}
			System.out.println(\n);
		}
	}
}
```

```
public class AmericanFlag {
	public static void main(String[] args) {
		for (int i = 0; i < 6; i++) {
			for (int j = 0; j < 11; j++) {
				if (i < 3) {
					if (j < 5) {
						System.out.print("* ");
					} else {
						System.out.print("= ");
					}
				} else {
					System.out.print("= ");
				}
			}
			System.out.println(\n);
		}
	}
}
```

Question Three

```
public class CalculateMean {
	public static void main(String[] args) {
		int[] numbers = {2, 5, 5, 9, 4, 7, 0, 9, 6, 11, 12};

		int sum = 0;
		double mean;

		for (int number : numbers) {
			sum += number;
		}

		mean = (double) sum / numbers.length;

		System.out.println("Sum of numbers: " + sum);
		System.out.println("Mean of numbers: " + mean);
	}
}
```

```
import java.util.Arrays;

public class CalculateMedian {
	public static void main(String[] args) {
		int[] numbers = {2, 5, 5, 9, 4, 7, 0, 9, 6, 11, 12};

		Arrays.sort(numbers);

		double median;

		if (numbers.length % 2 == 0) {
			int mid1 = numbers[numbers.length / 2 - 1];
			int mid2 = numbers[numbers.length / 2];
			median = (mid1 + mid2) / 2.0;
		} else {
			median = numbers[numbers.length / 2];
		}

		System.out.println("Sorted numbers: " + Arrays.toString(numbers));
		System.out.println("Median: " + median);
	}
}
```

```
public class StandardDeviationCalculator {
    public static void main(String[] args) {
        int[] numbers = {2, 5, 5, 9, 4, 7, 0, 9, 6, 11, 12};
        double sum = 0;
        for (int number : numbers) {
            sum += number;
        }
        double mean = sum / numbers.length;

        double varianceSum = 0;
        for (int number : numbers) {
            varianceSum += Math.pow(number - mean, 2);
        }
        double variance = varianceSum / numbers.length;
        double standardDeviation = Math.sqrt(variance);

        System.out.println("Numbers: " + java.util.Arrays.toString(numbers));
        System.out.println("Mean: " + mean);
        System.out.println("Standard Deviation: " + standardDeviation);
    }
}
```

Question Four

```
import java.util.Scanner;

public class TwoDArrayInput {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        int[][] array = new int[10][10];
        for (int i = 0; i < array.length; i++) {
            for (int j = 0; j < array[i].length; j++) {
                System.out.print("Enter value for index [" + i + "][" + j + "]: ");
                array[i][j] = scanner.nextInt();
            }
        }
        System.out.println("The values entered are:");
        for (int[] row : array) {
            for (int value : row) {
                System.out.print(value + " ");
            }
            System.out.println(\n);
        }
    }
}
```

Question Five

```
import java.util.Scanner;

public class ArrayInput {
	public static void main(String[] args) {
		Scanner scanner = new Scanner(System.in);
		int[] array = new int[10];

		for (int i = 0; i < array.length; i++) {
			System.out.print("Enter value for index " + i + ": ");
			array[i] = scanner.nextInt();
		}

		System.out.println("The values entered are:");
		for (int value : array) {
			System.out.println(value);
		}

	}
}
```