

ST10468539_PROG6112_Exam

Name and Surname: Benjamin Brian Mayes

Student No: ST10468539

Course code: BCAD0701

Lecturer: Mr. Amakan Elisha Agoni

Module Code: PROG6112

Group: GRO3

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Links to used material and answer submission space

Link to GitHub: https://github.com/VCCT-PROG6112-2025-G3/ST10468539_Benjamin_Mayes_BCAD0701_PROG6112_GRO3_Exam

Question 1

```
package st10468539_prog6112_exam_q1;

public class ST10468539_PROG6112_exam_Q1 {

    public static void main(String[] args) {

        /*
        Fetched code from W3 schools for creating 2d arrays
        https://www.w3schools.com/java/java_arrays_multi.asp
        */

        String[] Quaters = {"QUATER 1", "QUATER 2", "QUATER 3"};
        String[] Years = {"YEAR 1", "YEAR 2"};
        int[][] Sales = {
            {300, 150, 700},
            {250, 200, 600}
        };

        ProductSales obj = new ProductSales (Quaters, Years, Sales);

        int total = obj.total();

        int average = obj.average();
```

```

int maximum = obj.maximum();

int minimum = obj.minimum();


System.out.println("PRODUCT SALES REPORT - 2025\n"
    + "*****\n"
    + "Total sales: " + total
    + "\nAverage sales: " + average
    + "\nMaximum sale: " + maximum
    + "\nMinimum sale: " + minimum
    + "\n*****"
);
}

}

//=====
// END-OF-FILE
//=====

```

Q1 ProductSales Class

```

package st10468539_prog6112_exam_q1;

public class ProductSales {

    /* Fetched code from W3 schools for implementing modifiers
    https://www.w3schools.com/java/java_modifiers.asp */

    public String[] Quater;

```

```
public String[] Years;

public int[][] sales;

/* Fetched code from Geeks for Geeks for implementing constructors
https://www.geeksforgeeks.org/java/constructors-in-java/ */

public ProductSales (String[] Quater, String[] Years, int[][] sales) {
    this.Quater = Quater;
    this.Years = Years;
    this.sales = sales;
}

public int total() {

    int sum = 0;

    /* Fetched code from W3 schools for creating an index-based for loop
    https://www.w3schools.com/java/java\_arrays\_loop.asp */

    // iterate through rows
    for (int i = 0; i < sales.length; i++) {
        int[] row = sales[i];

        // get total for each row
        for (int j = 0; j < row.length; j++) {
            sum += row[j];
        }
    }
}
```

```
        return sum;
    }

    public int average(){

        int sum = 0;
        int fields = 0;

        /* Fetched code from W3 schools for creating an index-based for loop
        https://www.w3schools.com/java/java_arrays_loop.asp */

        // iterate through rows
        for (int i = 0; i < sales.length; i++) {
            int[] row = sales[i];

            // get total for each row
            for (int j = 0; j < row.length; j++) {
                sum += row[j];

                // count one more field
                fields += 1;
            }
        }

        // calculate and return average
        return sum / fields;
    }
}
```

```

public int maximum(){
    int max = 0;

    /* Fetched code from W3 schools for creating an index-based for loop
    https://www.w3schools.com/java/java_arrays_loop.asp */

    // iterate through rows
    for (int i = 0; i < sales.length; i++) {
        int[] row = sales[i];

        // iterate through fields
        for (int j = 0; j < row.length; j++) {
            // measure current field against maximum
            if (row[j] > max) {
                // reset max
                max = row[j];
            }
        }
    }

    return max;
}

```

```

public int minimum(){
    int min = 100000;

    /* Fetched code from W3 schools for creating an index-based for loop

```

https://www.w3schools.com/java/java_arrays_loop.asp */

```
// iterate through rows
for (int i = 0; i < sales.length; i++) {
    int[] row = sales[i];

    // iterate through fields
    for (int j = 0; j < row.length; j++) {
        // measure current field against maximum
        if (row[j] < min) {
            // reset max
            min = row[j];
        }
    }
}

return min;
}
}

//=====
// END-OF-FILE
//=====
```

Question 2

```
package st10468539_prog6112_exam_q2;
```

```
public class ProductSales {

    // method to calculate total product sales
    int GetTotalSales() {
        return 0;
    }

    // methods to retrieve the sales over the limit
    int getSalesOverLimit() {
        return 0;
    }

    // method to retrieve the sales under the limit
    int getSalesUnderLimit() {
        return 0;
    }

    // method to calculate average product sales
    double getAverageSales() {
        return 0.0;
    }
}

//=====
// END-OF-FILE
//=====
```

Q2 productSales Class

```
package st10468539_prog6112_exam_q2;
```

```
public class ProductSales {
```

```
    // method to calculate total product sales
```

```
    int GetTotalSales() {
```

```
        return 0;
```

```
    }
```

```
    // methods to retrieve the sales over the limit
```

```
    int getSalesOverLimit() {
```

```
        return 0;
```

```
    }
```

```
    // method to retrieve the sales under the limit
```

```
    int getSalesUnderLimit() {
```

```
        return 0;
```

```
    }
```

```
    // method to calculate average product sales
```

```
    double getAverageSales() {
```

```
        return 0.0;
```

```
    }
```

```
}
```

```
//=====
```

// END-OF-FILE

//=====