

ST10468539_PROG6112_Exam

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Course code: BCAD0701

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Module Code: PROG6112

Group: GRO3

Date: 10 November 2025

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; i < row.length; i++) {  
            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; i < row.length; i++) {  
            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; i < row.length; i++) {

            // 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; i < row.length; i++) {

            // measure current field against minimum

            if (row[j] < min) {

```

[https://www.w3schools.com/java/java_arrays_loop.asp */](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; i < row.length; i++) {
        // 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

//=====