

JUnit

1

```
import java.util.Scanner;

public class MinMaxFinder {

    public static int getMaxValue(int[] array) {
        int value = Integer.MIN_VALUE;

        if (array.length <= 0) {
            throw new IllegalArgumentException("Array is empty.");
        }

        for (int i = 0; i < array.length; i++) {
            if (array[i] > value) {
                value = array[i];
            }
        }
        return value;
    }

    public static int getMinValue(int[] array) {
        int value = Integer.MAX_VALUE;

        if (array.length <= 0) {
            throw new IllegalArgumentException("Array is empty.");
        }

        for (int i=0; i < array.length; i++) {
            if (array[i] < value) {
                value = array[i];
            }
        }
        return value;
    }
}
```

```
Package Explorer JUnit
Finished after 0.217 seconds
Runs: 1/1 Errors: 0 Failures: 0
> MinMaxFinderTest [Runner: JUnit 5] (0.000 s)

MinMaxFinder.java MinMaxFinderTest.java
1=import static org.junit.jupiter.api.Assertions.*;
2 import org.junit.jupiter.api.Test;
3 import static org.junit.Assert.assertEquals;
4
5 public class MinMaxFinderTest {
6
7     int[] array = new int[] {56,34,7,3,54,3,34,34,53};
8
9     //testcase1
10=    @Test
11    public void shouldBeMaxValue() {
12        int maxValue = MinMaxFinder.getMaxValue(array);
13        assertEquals(56, maxValue);
14    }
15    //testcase2
16    /*@Test
17    public void shouldBeMinValue() {
18        int minValue = MinMaxFinder.getMinValue(array);
19        assertEquals(3, minValue);
20    }*/
21    //testcase3
22    /*@Test(expected = IllegalArgumentException.class)
23    public void shouldBeIllegalArgumentException() {
24        int[] emptyArray = new int[] {};
25        int maxValue = MinMaxFinder.getMaxValue(emptyArray);
26        int minValue = MinMaxFinder.getMinValue(emptyArray);
27    }*/
```

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Finished after 0.209 seconds

Runs: 1/1 Errors: 0 Failures: 0

MinMaxFinderTest [Runner: JUnit 5] (0.028 s)

```

1 import static org.junit.jupiter.api.Assertions.*;
2 import org.junit.jupiter.api.Test;
3 import static org.junit.Assert.assertEquals;
4
5 public class MinMaxFinderTest {
6
7     int[] array = new int[] {56,34,7,3,54,3,34,34,53};
8
9     //testcase1
10    /*@Test
11     public void shouldBeMaxValue() {
12         int maxValue = MinMaxFinder.getMaxValue(array);
13         assertEquals(maxValue, 56);
14     }*/
15    //testcase2
16    @Test
17    public void shouldBeMinValue() {
18        int minValue = MinMaxFinder.getMinValue(array);
19        assertEquals(minValue, 3);
20    }
21    //testcase3
22    /*@Test(expected = IllegalArgumentException.class)
23     public void shouldBeIllegalArgumentException() {
24         int[] emptyArray = new int[] {};
25         int maxValue = MinMaxFinder.getMaxValue(emptyArray);
26         int minValue = MinMaxFinder.getMinValue(emptyArray);
27     }*/

```

Failure Trace

3

<terminated> BankTest [JUnit] C:\Program Files\Java\jdk-16.0.2\bin\javaw.e

Deposit an amount
10000
Withdraw an amount
11000

Finished after 14.135 seconds

Runs: 1/1 Errors: 1 Failures: 0

BankTest [Runner: JUnit 5] (13.9 s)

Failure Trace

- java.lang.NullPointerException: Car
 - at BankTest.bankAccount(BankTest.java:24)
 - at java.base/java.util.ArrayList.forEach(ArrayList.java:1511)
 - at java.base/java.util.ArrayList.forEach(ArrayList.java:1511)

```

1 import static org.junit.jupiter.api.Assertions.*;
2
3 import java.util.Scanner;
4
5 import org.junit.jupiter.api.Assertions;
6 import org.junit.jupiter.api.Test;
7
8 class BankTest {
9
10    @Test
11
12    void bankAccount() throws IllegalAccessException {
13        {
14            double balance = 0, damount, wamount;
15
16            Scanner dep=new Scanner(System.in);
17            System.out.println("Deposit an amount");
18            damount=dep.nextInt();
19            balance += damount;
20
21            Scanner wd=new Scanner(System.in);
22            System.out.println("Withdraw an amount");
23            wamount=wd.nextInt();
24            balance -= wamount;
25            if (balance<0)
26            {
27                throw new IllegalAccessException();
28            }
29            else
30                System.out.println(balance);
31        }
32
33    void main(String args[])
34    {
35
36        try
37        {
38            bankAccount();
39        }
40        catch(IllegalAccessException ex)
41        {
42            System.out.println("Exceeding Balance");
43        }
44    }

```

```

<terminated> MathsTest [JUnit] C:\Program Files\Java\jdk-16.0.2\bin\javaw.
1.Before All Executed
2.BeforeEach executed
3.Test case -> successful
2.BeforeEach executed
3.Test case -> successful
4.The application is terminated

```

Package Explorer JUnit

Finished after 0.233 seconds

Runs: 2/2 Errors: 0 Failures: 0

MathsTest [Runner: JUnit 5] (0.0)

testAdd() (0.023 s)

testDivide() (0.005 s)

```

1=import static org.junit.jupiter.api.Assertions.*;
2
3import org.junit.jupiter.api.AfterAll;
4import org.junit.jupiter.api.AfterEach;
5import org.junit.jupiter.api.BeforeAll;
6import org.junit.jupiter.api.BeforeEach;
7import org.junit.jupiter.api.Test;
8
9class MathsTest {
10    static Maths maths;
11
12    @BeforeAll
13
14    static void beforeAllInit() {
15        System.out.println("1.Before All Executed");
16    }
17
18    @BeforeEach
19    void init() {
20        maths = new Maths();
21        System.out.println("2.BeforeEach executed");
22    }
23
24
25    @Test
26    void testAdd() {
27
28        int expected = 2;
29        int actual = maths.add(1,1);
30        assertEquals(expected, actual, " Addition of two numbers");
31    }
32
33
34    @Test
35    void testDivide() {
36        assertThrows(ArithmeticException.class, ()->maths.divide(1,0), "Divide by zero should throw");
37    }
38
39
40    @AfterEach
41    void cleanup() {
42        System.out.println("3.Test case -> successful");
43    }
44
45

```