

MIT WORLD PEACE UNIVERSITY

Object Oriented Programming with Java and C++
Second Year B. Tech, Semester 1

CASE STUDY - ELEMENTS OF AN ARRAY

PROJECT REPORT

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1 Code

1.1 C++ Implementation of Problem

```
1 // C++ and Java Program to Calculate Average of elements in an Integer Arrays.Take
   input values.Also display number of elements which are greater than average
   value.
2 // Krishnaraj Thadesar
3 // PA 20 Batch A1
4
5 #include <iostream>
6 using namespace std;
7 int main()
8 {
9     int size = 10, average = 0;
10    cout << "What size array do you want? " << endl;
11    cin >> size;
12    int arr[size];
13    cout << "Enter the elements of the array!" << endl;
14    for (int i = 0; i < size; i++)
15    {
16        cin >> arr[i];
17        average += arr[i];
18    }
19    average /= size;
20    cout << "The Average of all the elements in the array is: " << average << endl
21    ;
22    cout << "The Elements of the Array which are greater than the Average of the
   Array are: " << endl;
23    for (int i = 0; i < size; i++)
24    {
25        if (arr[i] > average)
26        {
27            cout << arr[i] << endl;
28        }
29    }
30    return 0;
31 }
```

Listing 1: Main.Cpp

1.2 Java Implementation of Problem

```
1 // C++ and Java Program to Calculate Average of elements in an Integer Arrays.Take
   input values.Also display number of elements which are greater than average
   value.
2 // Krishnaraj Thadesar
3 // PA 20 Batch A1
4
5 import java.util.*;;
6
7 public class Main {
8     static Scanner input = new Scanner(System.in);
9
10    public static void main(String[] args) {
11
12        int size = 10, average = 0;
13        System.out.println("Enter the size of the Array that you want to enter");
```

```
14     size = input.nextInt();
15     Integer arr[] = new Integer[size];
16     System.out.println("Enter the Elements of the Array: ");
17     for (int i = 0; i < size; i++) {
18         arr[i] = input.nextInt();
19         average += arr[i];
20     }
21     average /= size;
22     System.out.println("The Average of All the Elements that you have entered
23 is: " + average);
24     System.out.println("The Elements that are above the Average of all the
25 elements are: ");
26     for (int i = 0; i < size; i++) {
27         if (arr[i] > average) {
28             System.out.println(arr[i] + " ");
29         }
30     }
```

Listing 2: Main.java

1.3 Output

```
1 What size array do you want?
2 5
3 Enter the elements of the array!
4 2
5 6
6 3
7 7
8 9
9 The Average of all the elements in the array is: 5
10 The Elements of the Array which are greater than the Average of the Array are:
11 6
12 7
13 9
```

Listing 3: Output for C++

```
1 Enter the size of the Array that you want to enter
2 10
3 Enter the Elements of the Array:
4 1
5 2
6 3
7 4
8 5
9 6
10 7
11 8
12 9
13 3
14 The Average of All the Elements that you have entered is: 4
15 The Elements that are above the Average of all the elements are:
16 5
17 6
18 7
19 8
```

Listing 4: Output for Java