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

Prepared By

Krishnaraj Thadesar
Cyber Security and Forensics
Batch A1, PA 20

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1 Code

1.1 C++ Implementation of Problem

```cpp
// 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.

#include <iostream>
using namespace std;
int main()
{
    int size = 10, average = 0;
    cout << "What size array do you want? " << endl;
    cin >> size;
    int arr[size];
    cout << "Enter the elements of the array!" << endl;
    for (int i = 0; i < size; i++)
    {
        cin >> arr[i];
        average += arr[i];
    }
    average /= size;
    cout << "The Average of all the elements in the array is: " << average << endl;
    cout << "The Elements of the Array which are greater than the Average of the Array are: " << endl;
    for (int i = 0; i < size; i++)
    {
        if (arr[i] > average)
        {
            cout << arr[i] << endl;
        }
    }

    return 0;
}
```

Listing 1: Main.Cpp

1.2 Java Implementation of Problem

```java
import java.util.*;;

public class Main {
    static Scanner input = new Scanner(System.in);

    public static void main(String[] args) {

        int size = 10, average = 0;
        System.out.println("Enter the size of the Array that you want to enter");
        size = input.nextInt();
        Integer arr[] = new Integer[size];
        System.out.println("Enter the Elements of the Array: ");
        for (int i = 0; i < size; i++) {
            arr[i] = input.nextInt();
            average += arr[i];
        }
        average /= size;
```

```
18          System.out.println("The Average of All the Elements that you have entered
    is: " + average);
19          System.out.println("The Elements that are above the Average of all the
    elements are: ");
20          for (int i = 0; i < size; i++) {
21              if (arr[i] > average) {
22                  System.out.println(arr[i]);
23              }
24          }
25      }
26  }
```

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 Problem 1