

Unit #1.2

1) An array is called balanced if it's even numbered elements (a[0], a[2], etc.) are even and its odd numbered elements (a[1], a[3], etc.) are odd. Write a function named balanced that accepts an array of integers which returns 1 if the array is balanced and returns 0 otherwise. [2075]

Program:

```
package com.company;
```

```
import java.util.Scanner;
```

```
public class Main {
```

```
    public int balanced(int[] array) {
        int size = array.length;
        boolean isBalanced = false;
        for (int i = 1; i <= (size-1); i++) {
            if (i % 2 != 0) {
                if (array[i] % 2 != 0.0)
                    isBalanced = true;
                else
                    isBalanced = false;
            } else if (i % 2 == 0) {
                if (array[i] % 2 == 0)
                    isBalanced = true;
                else
                    isBalanced = false;
            }
        }
    }
```

```
    if (isBalanced == true)
        return 1;
    else
        return 0;
}
```

```
public static void main(String[] args) {
    Scanner input = new Scanner(System.in);
    System.out.println("Enter the size of your Array\n");
    int size = input.nextInt();
    size = size + 1;
    int[] array = new int[size];

    System.out.println("Enter the elements in your Array");
    for (int i = 1; i <= (size-1); i++) {
        array[i] = input.nextInt();
    }
}
```

```
Main m = new Main();
```

```
int a = m.balanced(array);
System.out.println("This output from the function is\n");
System.out.println(a);
if (a == 1)
    System.out.println("\nHence, the array is Balanced");
else
    System.out.println("\nHence, the array does not happened to
```

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```
be Balanced ");
```

```
    }  
}
```

Output :

When the array is balanced array :-

```
/home/aashish/.jdk8/openjdk-14.0.1/bin/java -ja  
Enter the size of your Array  
  
5  
Enter the elements in your Array  
1  
2  
3  
4  
5  
This output from the function is  
  
1  
  
Hence,the array is Balanced
```

When the array is not a balanced array :-

```
/home/aashish/.jdk8/openjdk-14.0.1/bin/java -javaagent:/  
Enter the size of your Array  
  
5  
Enter the elements in your Array  
2  
2  
2  
2  
2  
This output from the function is  
  
0  
  
Hence,the array doses not happened to be Balanced
```