

Competitive Programming

BackTracking

Assignment 2-4

Week2-Wednesday

Code:

```
import java.util.Scanner;

public class SubsetSum
{
    static boolean subsetSum(int[] arr, int index, int target) {
        if (target == 0)
            return true;

        if (index == arr.length || target < 0)
            return false;

        if (subsetSum(arr, index + 1, target - arr[index]))
            return true;

        return subsetSum(arr, index + 1, target);
    }

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        int n = sc.nextInt();

        int[] arr = new int[n];

        for (int i = 0; i < n; i++) {
            arr[i] = sc.nextInt();
        }

        int target = sc.nextInt();

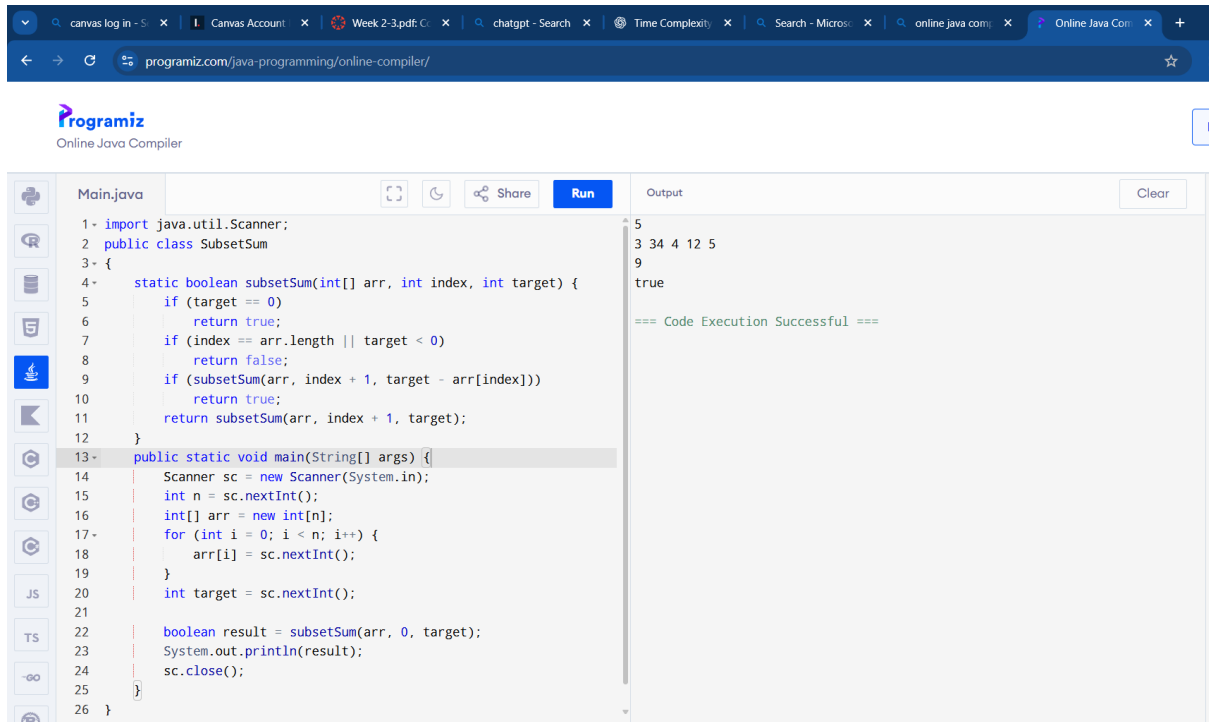
        boolean result = subsetSum(arr, 0, target);
```

```
System.out.println(result);
```

```
sc.close();
```

```
}
```

```
}
```



The screenshot shows the Programiz Online Java Compiler interface. The browser's address bar displays `programiz.com/java-programming/online-compiler/`. The compiler's header includes the Programiz logo and the text "Online Java Compiler". On the left, a sidebar contains icons for various programming languages: Java (selected), Python, JavaScript, TypeScript, C++, C, PHP, and Ruby. The main editor area, titled "Main.java", contains the following Java code:

```
1- import java.util.Scanner;
2- public class SubsetSum
3- {
4-     static boolean subsetSum(int[] arr, int index, int target) {
5-         if (target == 0)
6-             return true;
7-         if (index == arr.length || target < 0)
8-             return false;
9-         if (subsetSum(arr, index + 1, target - arr[index]))
10-            return true;
11-         return subsetSum(arr, index + 1, target);
12-     }
13- public static void main(String[] args) {
14-     Scanner sc = new Scanner(System.in);
15-     int n = sc.nextInt();
16-     int[] arr = new int[n];
17-     for (int i = 0; i < n; i++) {
18-         arr[i] = sc.nextInt();
19-     }
20-     int target = sc.nextInt();
21-
22-     boolean result = subsetSum(arr, 0, target);
23-     System.out.println(result);
24-     sc.close();
25- }
26 }
```

Below the code editor is a "Run" button. To the right of the code editor is an "Output" panel with a "Clear" button. The output panel displays the following text:

```
5
3 34 4 12 5
9
true
=== Code Execution Successful ===
```