

.Given a square matrix mat, return the sum of the matrix diagonals.

Only include the sum of all the elements on the primary diagonal and all the elements on the secondary diagonal that are not part of the primary diagonal.

Example 1:

Input: mat = [[1,2,3],
 [4,5,6],
 [7,8,9]]

Output: 25

Explanation: Diagonals sum: $1 + 5 + 9 + 3 + 7 = 25$

Example 2:

Input: mat = [[1,1,1,1],
 [1,1,1,1],
 [1,1,1,1],
 [1,1,1,1]]

Output: 8

Find the celling number in the given array

Celling Number: smallest number in the array that is greater than or equal to the target

Example 1:

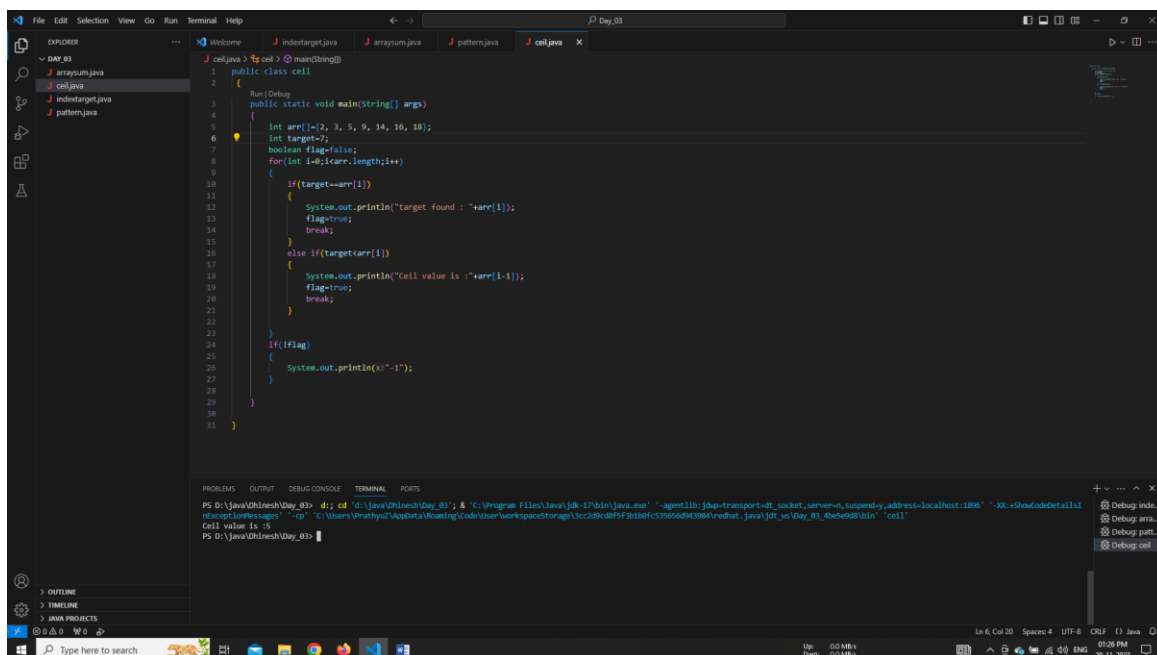
input: arr = [2, 3, 5, 9, 14, 16, 18], target = 14
output: 14

Example 2:

input: arr = [2, 3, 5, 9, 14, 16, 18], target = 15
output: 16

Example 3:

input: arr = [2, 3, 5, 9, 14, 16, 18], target = 19
output: -1



```
1 public class cell {
2     {
3         public static void main(String[] args)
4         {
5             int arr[]={2, 3, 5, 9, 14, 16, 18};
6             int target=15;
7             boolean flag=false;
8             for(int i=0;i<arr.length;i++)
9             {
10                 if(target<=arr[i])
11                 {
12                     System.out.println("target found : "+arr[i]);
13                     flag=true;
14                     break;
15                 }
16                 else if(target<arr[i])
17                 {
18                     System.out.println("cell value is : "+arr[i-1]);
19                     flag=true;
20                     break;
21                 }
22             }
23             if(!flag)
24             {
25                 System.out.println("-1");
26             }
27         }
28     }
29 }
30 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS D:\Java\Udhresh\Day_03> cd .; cd "D:\Java\Udhresh\Day_03"; & "C:\Program Files\Java\jdk-17\bin\java.exe" "-agentlib:jdwp=transport=dt_socket,server=n,suspend=y,address=localhost:1896" "-Xmx512M" "-XX:ShowCodeDetails=1"
Cell value is 14
PS D:\Java\Udhresh\Day_03>
```

Find the index of the target element in the given array

Example 1:

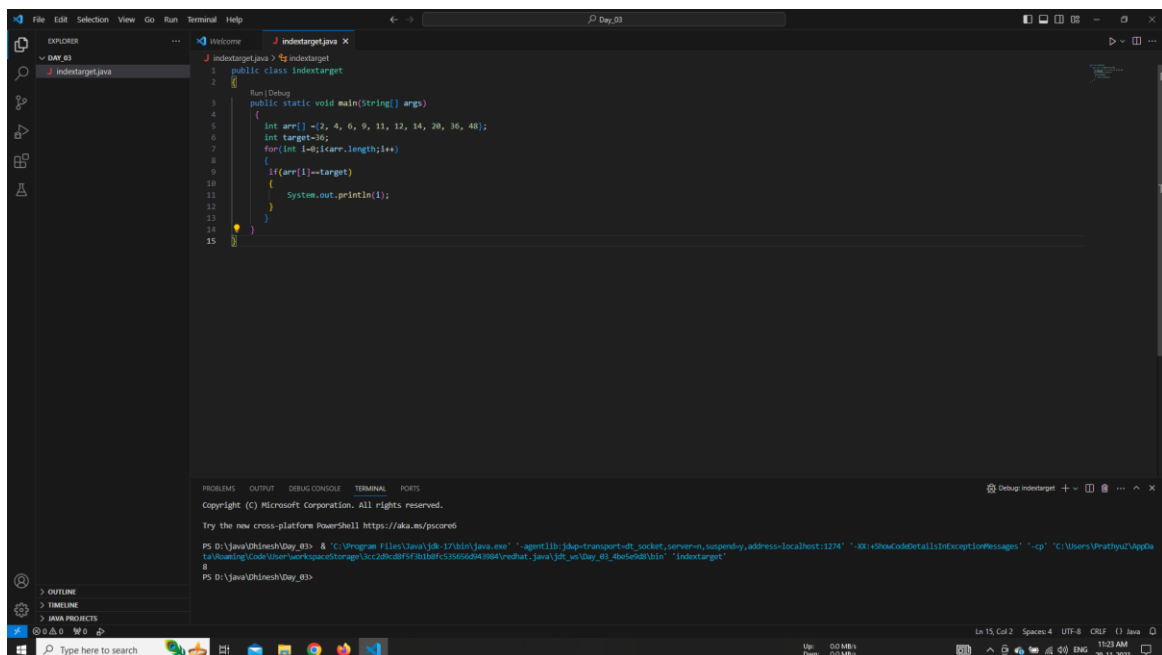
Input: arr = [2, 4, 6, 9, 11, 12, 14, 20, 36, 48], target = 36

Output: 8

Example 2:

Input: arr = [2, 4, 6, 9, 11, 12, 14, 20, 36, 48], target = 1

Output: -1



The screenshot shows an IDE with a Java file named `indextarget.java`. The code implements a linear search algorithm to find the index of a target element in an array. The array is `[2, 4, 6, 9, 11, 12, 14, 20, 36, 48]` and the target is `36`. The program prints the index `8` when the target is found.

```
1 public class indextarget
2 {
3     public static void main(String[] args)
4     {
5         int arr[] = {2, 4, 6, 9, 11, 12, 14, 20, 36, 48};
6         int target=36;
7         for(int i=0;i<arr.length;i++)
8         {
9             if(arr[i]==target)
10            {
11                System.out.println(i);
12            }
13        }
14    }
15 }
```

The terminal output shows the command `PS D:\Java\Inesh\Day_03> java -cp . indextarget` and the output `8`.

Given an array `nums`. We define a running sum of an array as running $\text{Sum}[i] = \text{sum}(\text{nums}[0] \dots \text{nums}[i])$.

Return the running sum of `nums`.

Note: Store the answer in the same array `nums` (question array).

Example 1:

Input: `nums = [1,2,3,4]`

Output: `[1,3,6,10]`

Example 2:

Input: `nums = [1,1,1,1,1]`

Output: `[1,2,3,4,5]`

Example 3:

Input: `nums = [3,1,2,10,1]`

Output: `[3,4,6,16,17]`

The screenshot shows an IDE with a Java file named `arraysum.java`. The code implements a method to calculate the running sum of an array `nums` and store the result back in the same array. The code is as follows:

```
1 public class arraysum
2 {
3     public static void main(String[] args)
4     {
5         int arr[]={1,2,3,4};
6         int temp=0;
7         for(int i=0;i<arr.length;i++)
8         {
9             arr[i]=temp+arr[i];
10            temp=arr[i];
11        }
12        for(int x:arr)
13        {
14            System.out.print(" ");
15        }
16    }
17 }
18 }
```

The terminal output shows the execution of the program, displaying the array `1 3 6 10`.

```
PS D:\Java\Udiness\Day_03> cd "d:\Java\Udiness\Day_03" & "C:\Program Files\Java\jdk-17\bin\java.exe" "-agentlib:jdwp=transport=dt_socket,server=true,suspend,address=1024" "-Xmx1024m" "-XX:+ShowCodeDetails" "arraysum"
1 3 6 10
PS D:\Java\Udiness\Day_03>
```

Print the below pattern.

```
* * * * *
* * * *
* * *
* *
    *
    *
* *
* * *
* * * *
* * * * *
```
