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# Count the number of holes in an integer

Difficulty Level : Basic    ●    Last Updated : 29 Apr, 2021

Given an integer **num**, the task is to count the number of holes in that number. The holes in each digit are given below:

| Digit | Number of Holes |
|---|---|
| 0 | 1 |
| 1 | 0 |
| 2 | 0 |
| 3 | 0 |
| 4 | 1 |
| 5 | 0 |
| 6 | 1 |
| 7 | 0 |
| 8 | 2 |
| 9 | 1 |

**Examples:**

**Input:** *num = 6457819*

**Output:** *5*

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Recommended: Please try your approach on *{IDE}* first, before moving on to the solution.

**Approach:** Initialize **holes = 0** and an array **hole[]** with the values given where **hole[i]** stores the number of holes in the digit **i**. Now, for every digit **d** in **num** update **holes = holes + hole[d]**. Print the **holes** in the end.
Below is the implementation of the above approach:

---

## C++

```cpp
// C++ implementation of the approach
#include <bits/stdc++.h>
using namespace std;

// Global array for hole values
int hole[] = { 1, 0, 0, 0, 1, 0, 1, 0, 2, 1 };

// Function to return the count
// of holes in num
int countHoles(int num)
{
    int holes = 0;

    while (num > 0) {

        // Last digit in num
        int d = num % 10;

        // Update holes
```

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```cpp
// Driver code
int main()
{
    int num = 6457819;

    cout << countHoles(num);

    return 0;
}
```

## Java

```java
// Java implementation of the approach
import java.io.*;

class GFG
{

// Global array for hole values
static int hole[] = { 1, 0, 0, 0, 1, 0, 1, 0, 2, 1 };

// Function to return the count
// of holes in num
static int countHoles(int num)
{
    int holes = 0;

    while (num > 0)
    {

        // Last digit in num
        int d = num % 10;

        // Update holes
        holes += hole[d];

        // Remove last digit
```

**Got It !**

```java
public static void main (String[] args)
{
    int num = 6457819;
    System.out.println(countHoles(num));
}
}


// This code is contributed by
// shk
```

## Python3

```python
# Python3 implementation of the approach

# Global array for hole values
hole = [ 1, 0, 0, 0, 1, 0, 1, 0, 2, 1 ]

# Function to return the count
# of holes in num
def countHoles(num):

    holes = 0

    while (num > 0) :

        # Last digit in num
        d = num % 10

        # Update holes
        holes = holes + hole[d]

        # Remove last digit
        num = num // 10

    # Return the count of holes
    # in the original num
    return holes
```

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```csharp
// C# implementation of the approach
using System;

class GFG
{

    // Global array for hole values
    static int []hole = { 1, 0, 0, 0, 1, 0, 1, 0, 2, 1 };

    // Function to return the count
    // of holes in num
    static int countHoles(int num)
    {
        int holes = 0;

        while (num > 0)
        {

            // Last digit in num
            int d = num % 10;

            // Update holes
            holes += hole[d];

            // Remove last digit
            num /= 10;
        }

        // Return the count of holes
        // in the original num
        return holes;
    }

    // Driver code
    public static void Main()
    {
        int num = 6457819;
        Console.WriteLine(countHoles(num));
    }
```

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```php
// Global array for hole values
$hole = array(1, 0, 0, 0, 1, 0, 1, 0, 2, 1);

// Function to return the count
// of holes in num
function countHoles($num)
{
    global $hole;
    $holes = 0;

    while ($num > 0)
    {

        // Last digit in num
        $d = $num % 10;

        // Update holes
        $holes += $hole[$d];

        // Remove last digit
        $num =  (int)($num / 10);
    }

    // Return the count of holes
    // in the original num
    return $holes;
}

// Driver code
$num = 6457819;

echo countHoles($num);

// This code is contributed
// by Akanksha Rai
?>
```

```javascript
// Function to return the count
// of holes in num
function countHoles( num)
{
    let holes = 0;

    while (num > 0) {

        // Last digit in num
        let d = num % 10;

        // Update holes
        holes += hole[d];

        // Remove last digit
        num = Math.floor(num/10);
    }

    // Return the count of holes
    // in the original num
    return holes;
}


    // Driver Code

    let num = 6457819;

    document.write(countHoles(num));

</script>
```

**Output:**

5

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