

19-Jan - Missing Number

UTTAM

Date

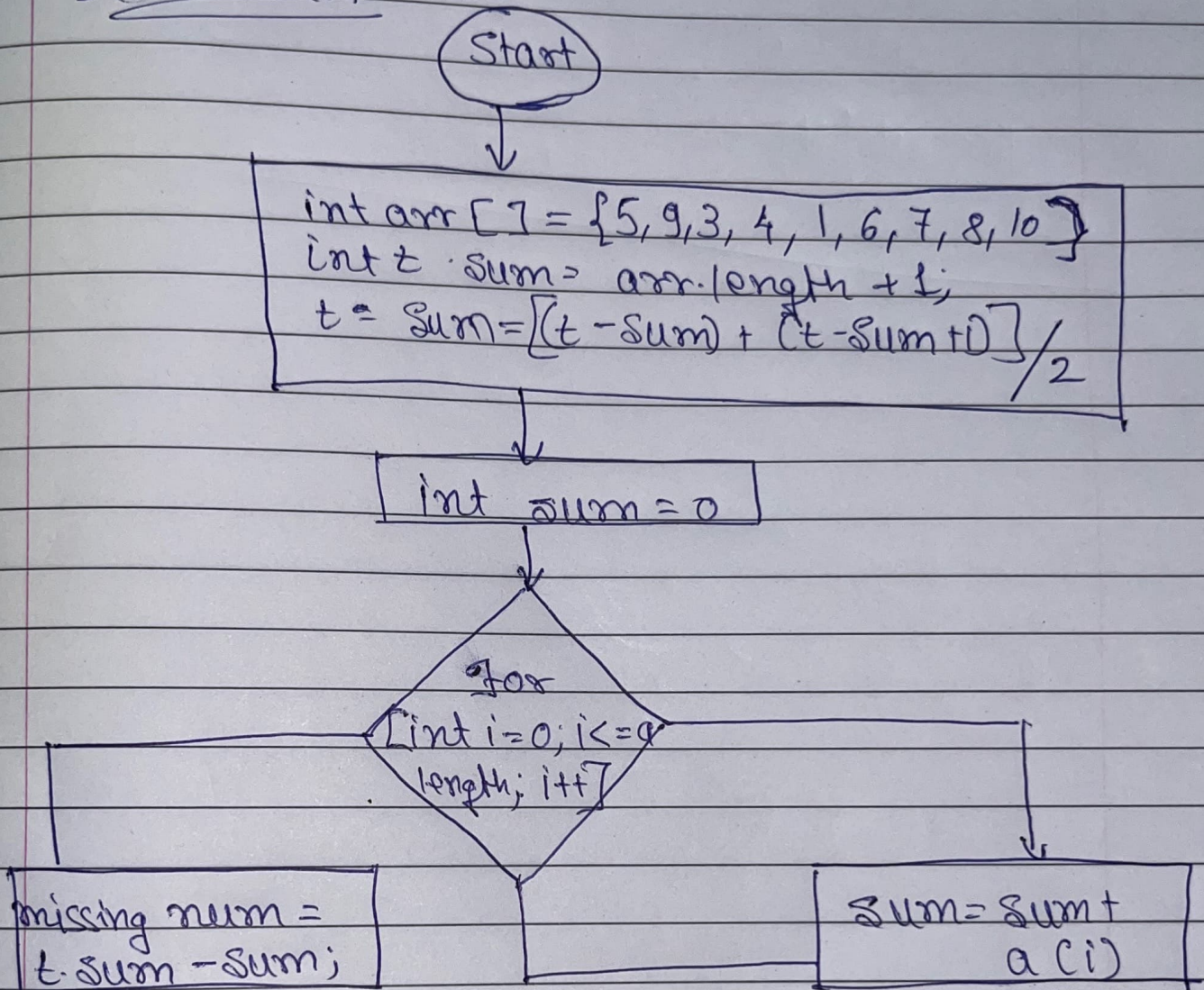
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Given = 5, 9, 3, 4, 1, 6, 7, 8, 10
Array

- ⇒ → Find the sum of first N number by using $N(N+1)/2$
- Save N as $N \geq \text{arr.length} + 1$
- Find the sum of given array by using for loop from $i=1$ to $i < \text{arr.length}$.
- Take sum as variable initialize it with 0 and using for loop find sum of number in array one by one

$$\text{Sum} = \text{Sum} + a[i]$$

- Find missing number by subtracting step 1 and step 4
- i.e :- missing number = $t - \text{sum} - \text{sum}$

Flow chart:-Pseudo Code:-

```

int t-sum = arr.length + 1;
t-sum = (t-sum * (t-sum + 1)) / 2

```

```

int sum = 0
for (i=0; i<=arr.length; i++)
{
    sum = sum + a[i];
}

```

```

int missing-num = t-sum - sum;
print-missing-num;

```