Important Problems

In [ ]:
```
Coding Questions
Question : 1
Write a program to return the difference between the count of odd numbers and even numbers.

Note : You are expected to write code in the countOddEvenDifference function only which will
       receive the first parameter as the number of items in the array and second parameter as the
       array itself. you are not required to take input from the console.

Example
Finding the difference between the count of odd and even numbers from a list of 5  number

Input
input 1 : 8
input 2 : 10 20 30 40 55 66 77 83

Output
-2

Explanation
The first paramter (8) is the szie of the array. Next is an array of integers.
The calculation of difference between count sum of odd and even numbers is as follows:

3 (count of odd numbers) - 5 (count of even numbers) = -2
```

In [5]:
```
def countOddEvenDifference(n,numbers):
    count_even=0
    count_odd=0
    for i in numbers:
        if i%2==0:
            count_even=count_even+1
        else:
            count_odd=count_odd+1
    return count_odd-count_even


numbers = [10,20,30,40,55,66,77,83]
print(countOddEvenDifference(8,numbers))
```

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-2
```

In [ ]:
```
Write a program to find the difference between the elements at odd index and even index.

Note : You are expected to write code in the findDifference function only
    which receive the first parameter as the numbers of items in the array and second parameter as
    the array itself. You are not required to take the input from the console.

Example

Finding the maximum difference between adjacent items of a list of 5 numbers

Input
input 1 : 7
input 2 : 10 20 30 40 50 60 70

Output
40

Explanation
The first parameter 7 is the size of the array. Sum of element at even index of array
is 10 + 30 + 50 + 70 = 160 and sum of elements at odd index of array is 20 + 40 + 60 = 120.
The difference between both is 40
```

In [6]:
```
def countOddEvenDifference(n,numbers):
    count_even=0
    count_odd=0
    for i in range(n):
        if i%2==0:
            count_even=count_even+numbers[i]
        else:
            count_odd=count_odd+numbers[i]
    return count_odd-count_even


numbers = [10,20,30,40,55,66,77,20]  ==> 172-209
print(countOddEvenDifference(8,numbers))
```

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37
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In [ ]:
```
A Cloth merchant has some pieces of cloth of different lengths. He has an order of curtains of length
of 12 feet. He has to find how many curtains can  be made from these pieces. Length of pieces of
cloth is recorded in feet.
Note : You are expected to write code in the findTotalCurtains function only which
    receive the first parameter as the number of items in the array and second parameter as the array
    itself. You are not required to take the input from the console.
Example
Finding the total curtains from a list of 5 cloth pieces.
Input
input 1 : 5
input 2 : 3 42 60 6 14
Output
9
Explanation
The first parameter 5 is the size of the array. Next is an array of measurements in feet.
The total number of curtains is 5 which is calculated as under


60 -> 5
6 -> 0
14 -> 1
total = 9
```

In [8]:
```
def findTotalCurtains(n,numbers):
    total=0
    for i in numbers:
        total=total+i//12
    print(total)
print(findTotalCurtains(6,[10,20,30,40,50]))
```

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10
None
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In [ ]:
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Q1. Find Large Small Difference


Write a program to return the difference between the largest and smallest
numbers from an array of positive integers.



Note:

You are expected to write code in the findLargeSmallDifference function
only which will receive the first parameter as the number of items in the array and the
second parameter is the array itself. You are not required to take input from the console.



Example:

Finding the difference between the largest and smallest from a list of 5 numbers.



Input

Input1: 5

Input2: 10 11 7 12 14



Output

7



Explanation:

The first parameter(5) is the size of the array. Next is an array of integers.
The difference between largest (14) and smallest(7) is 7.
```

In [ ]:
```
Q4. Calculate Total Tax


Write a program to calculate the total bill tax amount
for a list of billing amounts passed as an array of long integers.

Up to the amount 1000, there is no tax applicable, subsequently,
a flat tax of 10% is applicable for the remaining amount as per the tax rate.



Note:

All calculations and results should be integer-based ignoring fractions

You are expected to write code int the calcTotalTax function only
which will receive the first parameter as the number of items in the array and the
second parameter is the array itself. You are not required to take input from the console.



Example

Calculating total tax for a list of 5 billing amount



Input

5

1000 2000 3000 4000 5000



Output

1000



Explanation

The first parameter (5) is the size of the array. Next is an array
of billing amounts For the first amount there will be 0 tax and
for the next amount, it will be 10% of(2000-1000)=100 and so on.

The sum of all the tax amounts will be (0+100+200+300+400=1000)
```

In [ ]:
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