Assignment Number 1

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Ques 1> Write a C++ program to calculate the sum of all even and odd numbers in an array?

```
#include <iostream>
using namespace std;

int main () {
    int n;
    int a [n];
cout << "Enter the number of elements in an array :"
cin >> n;                                          <<endl;
int arr [n];
cout << "Enter " << n << " elements :" << endl;

for (int i = 0; i < n; i++ ) {
        cin >> arr [i];
    }

int sumEven = sumOdd = 0;
for (int i = 0; i < n; i++ ){
        if ( arr [i] % 2 == 0) {
                sumEven += arr [i];
        } else {
                SumOdd += arr [i];
        }
}
cout << "Sum of even numbers : " << sumEven << endl;
cout << "Sum of odd numbers : " << sumOdd << endl;
return 0;
}
```

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Ques 2) Write a C++ program that swaps two variables without using a third variable?

```
#include <iostream>
Using namespace std;

int main (){
    int a, b;
cout << "Enter the value of A:" <<endl;
cin >> a;
cout << "Enter the value of B:" <<endl;
cin >> b;
a = a + b;
b = a - b;
a = a - b;

cout << "After swaping, value of A:" << a << endl;
cout << " After swaping, value of B:" << b << endl;

return 0;
}
```

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Ques 3> Write a C++ program to enter length in centimeters and convert it into meters & kilometers?

```
#include <iostream>
using namespace std;

int main () {
    double centimeters, meters, kilometers;

    cout <<"Enter length in centimeters :"<< endl;
    cin >> centimeters;

    meters = centimeters / 1000;
    kilometers = centimeters / 10000;

    cout <<" Length in meters :" << meters << endl;
    cout <<" Length in kilometers :" << kilometers << endl;

    return 0;
}
```

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Ques 4]

4) Write a C++ program to compute quotient & remainder ?

```
#include<iostream>
using namespace std;

int main () {
    int divident, divisor, quotient, remainder;

    cout<<"Enter the divident: "<<endl;
    cin >> divident ;

    cout << " Enter the divisor: "<<endl;
    cin >> divisor ;

    quotient = divident / divisor ;
    remainder = divident % divisor;

    cout << "Quotient = " << quotient << endl;
    cout <<"Remainder = " << remainder << endl;

    return 0 ;
}
```

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Ques 159 970 371 407

5) Write a program to check weather a number is an Armstrong Number or NOT?

```
#include <iostream>
using namespace std;

int main () {
    int num, originalNum, remainder;
    int result = 0;
    cout <<" Enter an integer : " << endl;
    cin >> num;

    originalNum = num;

While (originalNum != 0) {
        remainder = originalNum % 10;
        result += remainder * remainder * remainder;
        originalNum /= 10;
}

if (num == result) {
cout << num << " is a Armstrong Number" <<
endl;
} else {
        cout << num << " is NOT a Armstrong Number " <<
endl;
}
    return 0;
}
```

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Ques 6> 12921 77477 01210

Write a program to check weather a Number is an palindrome Number or NOT?

```
#include <iostream>
using namespace std;

int main (){
    int num, originalNum, remainder;
    int reversedNum = 0;
cout <<"Enter an integer :" << endl;
cin >> num;

originalNum = num;

while (originalNum != 0) {
    remainder = originalNumber % 10;
    reversedNum = reversedNum * 10 + remainder;
    originalNum /= 10;
}
if(reversedNum == num ){
    cout <<num <<" is a palindrome Number." << endl;
} else {
    cout <<num << " is NOT a palindrome Number." << endl;
}
    return 0;
}
```

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Que 8]

7) Which of the following statements is correct about the formal parameters ?
a) Parameters with which functions are called.
b) Parameters which are used in the defination of the function.
c) Variables other than passed parameter in a function.
d) Variables that are never used in a function.

Soln] (b) Parameters which are used in the defination of the function.
explaination: Formal parameters are the variables that appear in the functions defination. They act as placeholders for the actual values (arguments) that will be passed to the function when it is called.

Que 8]

8) Which of the following gives the 4th element of the array ?
a) Array [0];
b) Array [0];
c) Array [3];
d) None of the Above.

Soln] (c) Array [3];
explaination: In C++ (and most programming langauges that use zero-based indexing), the index of first element in an array is '0'.
Thus the 4th element in an array is at index '3'.