

**Problem 1:**

You are required to write a simple statistics program using function to perform the following tasks.

Function to find i) Average of any (max five) integers ii) Sum of any (max five)

integers iii) Maximum of any (max five) integers, iv) Minimum of any (max five)

integers.

**Code:**

```
#include <iostream>

using namespace std;

// Function to calculate sum

int Sum(int arr[], int n) {

    int sum = 0;

    for (int i = 0; i < n; i++)
        sum += arr[i];

    return sum;
}

// Function to calculate average

double Average(int arr[], int n) {

    return (double)Sum(arr, n) / n;
}

// Function to find maximum

int Max(int arr[], int n) {

    int maxVal = arr[0];

    for (int i = 1; i < n; i++)
        if (arr[i] > maxVal) maxVal = arr[i];

    return maxVal;
}

// Function to find minimum

int Min(int arr[], int n) {

    int minVal = arr[0];
```

```
for (int i = 1; i < n; i++)  
    if (arr[i] < minVal) minVal = arr[i];  
  
return minVal;  
}  
  
int main() {  
  
    int n;  
  
    cout << "Enter the count of integers (1 to 5): ";  
  
    cin >> n;  
  
  
    if (n < 1 || n > 5) {  
  
        cout << "You must enter between 1 and 5 numbers.\n";  
  
        return 0;  
    }
  
  
    int arr[5];  
  
    cout << "Enter " << n << " integers: ";  
  
    for (int i = 0; i < n; i++) cin >> arr[i];
  
  
  
    cout << "Sum = " << Sum(arr, n) << endl;  
    cout << "Average = " << Average(arr, n) << endl;  
    cout << "Maximum = " << Max(arr, n) << endl;  
    cout << "Minimum = " << Min(arr, n) << endl;
  
  
  
    return 0;  
}
```

**Problem 2:**

Write a program that reads an integer from the keyboard and then calls a function to print it out in reverse. For example, if the user enters 4739, it prints 9374.

Using call by value, pointer and reference

**Code:**

```
#include <iostream>

using namespace std;

// Function (Call by Value)

void reverseByValue(int num) {

    cout << "Reversed (Call by Value): ";

    while (num > 0) {

        cout << num % 10;

        num /= 10;

    }

    cout << endl;

}

// Function (Call by Pointer)

void reverseByPointer(int *num) {

    cout << "Reversed (Call by Pointer): ";

    int n = *num;

    while (n > 0) {

        cout << n % 10;

        n /= 10;

    }

    cout << endl;

}
```

```
// Function (Call by Reference)

void reverseByReference(int &num) {

    cout << "Reversed (Call by Reference): ";

    int n = num;

    while (n > 0) {

        cout << n % 10;

        n /= 10;

    }

    cout << endl;

}

int main() {

    int num;

    cout << "Enter an integer: ";

    cin >> num;

    reverseByValue(num);

    reverseByPointer(&num);

    reverseByReference(num);

    return 0;

}
```