1. Given below is a simple program which uses pointers. Explain what is happening in this program. Execute it in visual studio and check whether it gives the expected output.

```
#include <iostream>
using namespace std;
int main() {
    int  var = 20;   // actual variable declaration.
    int  *ip;        // pointer variable

    ip = &var;       // store address of var in pointer variable

    cout << "Value of var variable: ";
    cout << var << endl;

    // print the value stored in ip pointer variable
    cout << "Value stored in ip variable: ";
    cout << ip << endl;

    // print the address of the var variable
    cout << "Address stored in var variable: ";
    cout << &var << endl;

    // access the value at the address available in pointer
    cout << "Value of *ip variable: ";
    cout << *ip << endl;

    return 0;
}
```

2. Write a program to take two user inputs and find the largest value by passing the two inputs to a function. Use pass by reference using pointers to implement the function. (function should accept 2 pointer variables as parameters)

3. Implement a program that will input 5 values to an array using a pointer and print the array values using the same pointer. Implement the following steps. Observe the difference of using pointers and direct array access.
   Steps:
   Create an array
   Create a pointer
   Assign the array's address to the pointer
   Take inputs using the pointer (in a for loop)
   Print the array values using the pointer

4. What is a double pointer? Search the internet to find it. Implement a double pointer in the question one and print the value using it.

5. Below program implements the bubble sort algorithm using a pointer. Understand the program and Implement the program in visual studio.

```cpp
#include <iostream>
using namespace std;
int Bubblesort(int *array, int size);
int main()
    {
        const int arraySize = 10; // size of array a
        int a[arraySize]; // create array a
        int *arraypointer = a;

        cout << "Enter the 10 array elements: ";
        for (int i = 0; i < arraySize; ++i) {
            cin >> arraypointer[i];
        }
        Bubblesort(arraypointer, arraySize);

        cout << "Array after bubble sort:";
        for (int i = 0; i < arraySize; ++i) {
            cout << " " << a[i] << endl;
        }
        return 0;
    }

    int Bubblesort(int *array, int size)
    {
        int i, temp, j;
        for (i = 1; i<size; ++i)
        {
            for (j = 0; j<(size - i); ++j)
                if ( array[j] > array[j + 1])
                {
                    temp = array[j];
                    array[j] = array[j + 1];
                    array[j + 1] = temp;
                }
        }
        return 0;
    }
```