**Report No:** 01

**Report Name:** Write a program for bubble sort

**Code:**

#include<iostream>

using namespace std;

int main(){

int size, i, j, temp;

cout << "Enter size of an array: ";

cin >> size;

int myArray[size];

for(i = 0; i < size; i ++){

cout << "Enter " << (i + 1) << " element: ";

cin >> myArray[i];

}

for(i = 0; i < size; i++){

for(j = 0; j < size -1; j ++){

if(myArray[j] > myArray[j+1]){

temp = myArray[j];

myArray[j] = myArray[j+1];

myArray[j+1] = temp;

}

}

}

cout << "Bubble sort in ascending order: ";

for(i = 0; i < size; i++){

cout <<myArray[i] << " ";

}

}

**Input and Output:**

Enter size of an array: 5

Enter 1 element: 69

Enter 2 element: 45

Enter 3 element: 98

Enter 4 element: 15

Enter 5 element: 32

Bubble sort in ascending order: 15 32 45 69 98

**Report No:** 02

**Report Name:** Write a program for fibonacci series

**Code:**

#include<iostream>

using namespace std;

int fibonacci(int n){

if(n <= 1){

return n;

}else{

return fibonacci(n-1) + fibonacci(n-2);

}

}

int main(){

int num, i;

cout << "Enter fibonacci num: ";

cin >> num;

for(i = 0 ; i <= num; i++){

cout << fibonacci(i) << " ";

}

}

**Input and Output:**

Enter fibonacci num: 21

0 1 1 2 3 5 8 13 21 34 55 89 144 233 377 610 987 1597 2584 4181 6765 10946

**Report No:** 03

**Report Name:** Write a program for fibonacci series

**Code:**

#include<iostream>

using namespace std;

int main(){

int size, i, j;

cout << "Enter size of an array: ";

cin >> size;

int myArray[size];

for(i = 0; i < size; i ++){

cout << "Enter " << (i + 1) << " element: ";

cin >> myArray[i];

}

int max = myArray[0];

for(i = 1; i < size; i ++){

if(myArray[i] > max){

max= myArray[i];

}

}

int C[max+1];

for(i = 0 ; i <= max; i++){

C[i] = 0;

}

for(j = 0; j < size; j++){

C[myArray[j]] = C[myArray[j]] + 1;

}

for(i = 1; i <= max; i++){

C[i]+=C[i-1];

}

int B[size + 1];

for(i = (size-1); i >=0; i--){

B[C[myArray[i]] - 1] = myArray[i];

C[myArray[i]] = C[myArray[i]] - 1;

}

cout << "Counting sort ascending order: ";

for(i = 0; i < size; i++){

cout << B[i] << " ";

}

}

**Input and Output:**

Enter size of an array: 5

Enter 1 element: 9

Enter 2 element: 12

Enter 3 element: 7

Enter 4 element: 6

Enter 5 element: 3

Counting sort ascending order: 3 6 7 9 12