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Q1. Write a program to Swap to two numbers.

#include <iostream>

using namespace std;

int main()

{

int a = 5, b = 10, temp;

cout << "Before swapping." << endl;

cout << "a = " << a << ", b = " << b << endl;

temp = a;

a = b;

b = temp;

cout << "\nAfter swapping." << endl;

cout << "a = " << a << ", b = " << b << endl;

return 0;

}

Q2. Write a program to find the largest number among three numbers entered by the user.

#include <iostream>

using namespace std;

int main() {

float n1, n2, n3;

cout << "Enter three numbers: ";

cin >> n1 >> n2 >> n3;

if (n1 >= n2) {

if (n1 >= n3)

cout << "Largest number: " << n1;

else

cout << "Largest number: " << n3;

}

else {

if (n2 >= n3)

cout << "Largest number: " << n2;

else

cout << "Largest number: " << n3;

}

return 0;

}

Q3. Write a program to check whether a year entered by a user is Leap year or not.

#include <stdio.h>

int main() {

int year;

printf("Enter a year: ");

scanf("%d", &year);

// leap year if perfectly divisible by 400

if (year % 400 == 0) {

printf("%d is a leap year.", year);

}

// not a leap year if divisible by 100

// but not divisible by 400

else if (year % 100 == 0) {

printf("%d is not a leap year.", year);

}

// leap year if not divisible by 100

// but divisible by 4

else if (year % 4 == 0) {

printf("%d is a leap year.", year);

}

// all other years are not leap years

else {

printf("%d is not a leap year.", year);

}

return 0;

}

Q4. Write a program to display Fibonacci Series upto nth term. (Using loops)

#include <iostream>

using namespace std;

int main() {

int n, t1 = 0, t2 = 1, nextTerm = 0;

cout << "Enter the number of terms: ";

cin >> n;

cout << "Fibonacci Series: ";

for (int i = 1; i <= n; ++i) {

// Prints the first two terms.

if(i == 1) {

cout << t1 << ", ";

continue;

}

if(i == 2) {

cout << t2 << ", ";

continue;

}

nextTerm = t1 + t2;

t1 = t2;

t2 = nextTerm;

cout << nextTerm << ", ";

}

return 0;

}

Q5. Write a program to check whether a number is Prime or Not.

#include <iostream>

using namespace std;

int main() {

int i, n;

bool isPrime = true;

cout << "Enter a positive integer: ";

cin >> n;

// 0 and 1 are not prime numbers

if (n == 0 || n == 1) {

isPrime = false;

}

else {

for (i = 2; i <= n / 2; ++i) {

if (n % i == 0) {

isPrime = false;

break;

}

}

}

if (isPrime)

cout << n << " is a prime number";

else

cout << n << " is not a prime number";

return 0;

}

Q6. Print this pattern using loops

For n=5

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#include <iostream>

using namespace std;

void printNextValue(int m){

if (m > 0){

cout<<m<<'\t';

printNextValue(m - 5);

}

cout<<m<<'\t';

}

int main(){

int n = 13;

cout<<"The pattern is:\n";

printNextValue(n);

return 0;

}

Q7.Write a program that takes n elements from the user and displays the second largest element of an array.

#include <iostream>

using namespace std;

int main()

{

int i, n;

float arr[100];

cout << "Enter total number of elements(1 to 100): ";

cin >> n;

cout << endl;

// Store number entered by the user

for(i = 0; i < n; ++i)

{

cout << "Enter Number " << i + 1 << " : ";

cin >> arr[i];

}

// Loop to store largest number to arr[0]

for(i = 1;i < n; ++i)

{

// Change < to > if you want to find the smallest element

if(arr[0] < arr[i])

arr[0] = arr[i];

}

cout << "Largest element = " << arr[0];

return 0;

}