C++ Assignment

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Q1:

#include<iostream>

using namespace std;

string checkEvenOdd(int number) {

    if (number % 2 == 0) {

        return "Even";

    } else {

        return "Odd";

    }

}

int main() {

    int num;

    cout << "Enter an integer: ";

    cin >> num;

    cout << "The number is " << checkEvenOdd(num) << "!!!" << endl;

    return 0;

}

Q2:

#include <iostream>

using namespace std;

int findLargest(int num1, int num2) {

    if (num1 > num2) {

        return num1;

    } else {

        return num2;

    }

}

int main() {

    int a, b;

    cout << "Enter two numbers: ";

    cin >> a >> b;

    cout << "The largest number is " << findLargest(a, b) << "." << endl;

    return 0;

}

Q3:

 #include <iostream>

using namespace std;

string checkNumber(int number) {

    if (number > 0) {

        return "Positive";

    } else if (number < 0) {

        return "Negative";

    } else {

        return "Zero";

    }

}

int main() {

    int num;

    cout << "Enter a number: ";

    cin >> num;

    cout << "The number is " << checkNumber(num) << "!!!" << endl;

    return 0;

}

Q4:

#include<iostream>

using namespace std;

int factorial(int num) {

    int factor = 1;

    int i = 1;

    while (i <= num) {

        factor \*= i;

        i++;

    }

    return factor;

}

int main() {

    int n;

    cout << "Enter a number: ";

    cin >> n;

    cout << "The factorial of " << n << " is " << factorial(n) << "." << endl;

    return 0;

}

Q5:

#include<iostream>

using namespace std;

void printNums(int num) {

    int i = 1;

    while (i <= num) {

        cout<<i<<" ";

        i++;

    }

}

int main() {

    int n;

    cout << "Enter a number: ";

    cin >> n;

    printNums(n);

    cout << endl;

    return 0;

}

Q6:

#include<iostream>

using namespace std;

int sumUpToNum(int num) {

    int sum = 0;

    int i = 1;

    while (i <= num) {

        sum += i;

        i++;

    }

    return sum;

}

int main() {

    int num;

    cout << "Enter a number: ";

    cin >> num;

    cout << "Sum of numbers from 1 to " << num << " = " << sumUpToNum(num) << endl;

    return 0;

}

Q7:

#include<iostream>

using namespace std;

bool isPrime(int num) {

    if (num <= 1) return false;

    int i = 2;

    while (i <= num/2) {

        if (num%i == 0) return false;

        i++;

    }

    return true;

}

int main() {

    int n;

    cout << "Enter a number: ";

    cin >> n;

    if (isPrime(n))

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

    else

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

    return 0;

}

Q8:

#include<iostream>

using namespace std;

void printFibonacci(int num) {

    int a = 0, b = 1, next, i = 1;

    while(i <= num) {

        cout<<a<<" ";

        next = a + b;

        a = b;

        b=next;

        i++;

    }

    cout<<endl;

}

int main() {

    int n;

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

    cin >> n;

    printFibonacci(n);

    return 0;

}

Q9:

#include<iostream>

using namespace std;

void printHelloWorld(int num) {

    int i = 0;

    do {

        cout << "Hello World" << endl;

        i++;

    } while (i < num);

}

int main() {

    int n;

    cout << "Enter a number: ";

    cin >> n;

    printHelloWorld(n);

    return 0;

}

Q10:

#include <iostream>

#include <vector>

using namespace std;

int main() {

    int n;

    cout << "How many numbers do you want to enter? ";

    cin >> n;

    vector<int> arr(n);

    cout << "Enter " << n << " numbers: ";

    for (int i = 0; i < n; i++) {

        cin >> arr[i];

    }

    cout << "Numbers in reverse order: ";

    for (int i = n - 1; i >= 0; i--) {

        cout << arr[i] << " ";

    }

    cout << endl;

    return 0;

}

Q11:

#include<iostream>

using namespace std;

void printPyramid(int rows) {

    for(int i = 1; i <= rows; i++) {

        for(int j = 1; j <= rows - i; j++) {

            cout << " ";

        }

        for(int k = 1; k <= (2 \* i - 1); k++) {

            cout << "\*";

        }

        cout << endl;

    }

}

int main() {

    int n;

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

    cin >> n;

    printPyramid(n);

    return 0;

}

Q12:

#include<iostream>

using namespace std;

void checkVotingEligibility(string name, int age) {

    cout << "User: " << name << endl;

    if (age >= 18)

        cout << "Eligible for voting." << endl;

    else

        cout << "Not eligible for voting." << endl;

}

int main() {

    string name;

    int age;

    cout << "Enter your name: ";

    cin >> name;

    cout << "Enter your age: ";

    cin >> age;

    checkVotingEligibility(name, age);

    return 0;

}