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// Day 22 coding Statement : Write a program to express a number as a sum of two
prime numbers
// Description: Get a number as input from the user and express that number as
sum of two prime numbers.
// Input: 4
// Output: 4 can be expressed as sum of 2 and 2
#include <iostream>
using namespace std;

bool check_prime(int n);

int main() {

    int n, i;
    bool flag = false;

    cout << "Enter an integer: ";
    cin >> n;

    for(i = 2; i <= n/2; ++i) {
        if (check_prime(i)) {
            if (check_prime(n - i)) {
                cout << n << " can be expressed as sum of " << i << " and " << n-i <<
endl;
                flag = true;
            }
        }
    }

    if (!flag)
        cout << n << " can't be expressed as sum of two prime numbers.";

    return 0;
}

bool check_prime(int n) {
    int i;
    bool is_prime = true;

    if (n == 0 || n == 1) {
        is_prime = false;
    }

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

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    if(n % i == 0) {  
        is_prime = false;  
        break;  
    }  
}  
  
return is_prime;  
}
```