Prime Numbers

Prime numbers are numbers which have only 2 distinct factors i.e 1 and the number itself. Eg. 2,3,5,7,19 etc.

Armstrong Numbers

Armstrong numbers are numbers which have their sum of cube of individual digits equal to the number itself.

E.g 153 = 1^3 + 5^3 + 3^3 = 1 + 125 + 27 = 153.

Practice Problems

Ques1. Write a program to check if a number is prime or not.

```cpp
#include <iostream>
#include<cmath>
using namespace std;

int main() {

    int n;
    cin>>n;

    bool flag=0;

    for(int i=2;i<=sqrt(n);i++){

        if(n%i==0){
            cout<<"Non-prime"<<endl;
            flag=1;
            break;
        }
    }

    if(flag==0){
        cout<<"prime"<<endl;
    }

    return 0;
}
```

Ques2. Write a program to print all the digits of a positive decimal number from right to left

```cpp
#include <iostream>
using namespace std;
int main()
{
    int n;
    cin >> n;
    while (n > 0)
    {
        int rem = n % 10;
        cout << rem << " \n ";
        n = n / 10;
    }
    return 0;
}
```

Ques3. Write a program to reverse a number

E.g Given a number 1879 we need to convert it to 9781.

100020 will be converted to 20001 (Note: We need to remove the trailing zeroes).

```cpp
#include <iostream>
using namespace std;

int main() {

    int n;
    cin>>n;

    int reverse=0;
    while(n>0){
        int lastdigit= n%10;
        reverse = reverse*10 + lastdigit;
        n=n/10;
    }

    cout<<reverse<<endl;



    return 0;
}
```

Ques4. Write a program to check if a number is Armstrong number

```cpp
#include <iostream>
#include<math.h>
using namespace std;
```

```cpp
int main() {

    int n;
    cin>>n;

    int sum=0;
    int originaln=n;
    while(n>0){
        int lastdigit= n%10;
        sum+= pow(lastdigit,3);
        n=n/10;
    }

    if(sum==originaln){
        cout<<"Armstrong number"<<endl;
    }
    else{
        cout<<"not armstrong"<<endl;
    }


    return 0;
}
```

Some more practice questions

Ques5. Write a program to print the ASCII value of any given character.
Ques6. Write a program to display all factors of a number.
Ques7. Write a program to find the factorial of a given number.
Ques8. Write a program to find whether a given character is a vowel or a consonant.

Apni Kaksha