Write a program to identify if the number is Perfect number or not

Description

Get the input from the user and check whether that number is a perfect number or not.

E.g. Let number is 28, factors of 28 are 1,2,4,7,14. Now the sum of all these factors are 28 itself.

Input

28

Output

Perfect Number

Input

4

Output

Not a perfect number

C Program

Method 1

```c
#include <stdio.h>
int main()
{
    int i,num,sum=0;
    printf("Enter a number: ");
    scanf("%d",&num);
    for(i=1;i<num;i++)
    {
        if(num%i==0)
        sum=sum+i;
    }
    if(num==sum)
    printf("Perfect number");
```

```
    else
    printf("Not a perfect number");
    return 0;
}
```

Method 2

```
#include <stdio.h>
#include<math.h>
int main()
{
    int i,num,sum=0;
    printf("Enter a number: ");
    scanf("%d",&num);
    for(i=1;i<=sqrt(num);i++)
    {
        if (num%i==0)
        {
            if(i==1)
                sum=sum+i;
            else if(i==num/i)
                sum=sum+i;
            else
                sum=sum+i+num/i;
        }
    }
    if(num==sum)
    printf("Perfect number");
    else
    printf("Not a perfect number");
```

```
    return 0;

}
```

C++ Program

Method 1

```cpp
#include <iostream>
using namespace std;
int main()
{
    int i,num,sum=0;
    cout<<"Enter a number: ";
    cin>>num;
    for(i=1;i<num;i++)
    {
        if(num%i==0)
        sum=sum+i;
    }
    if(num==sum)
    cout<<"Perfect number";
    else
    cout<<"Not a perfect number";
    return 0;
}
```
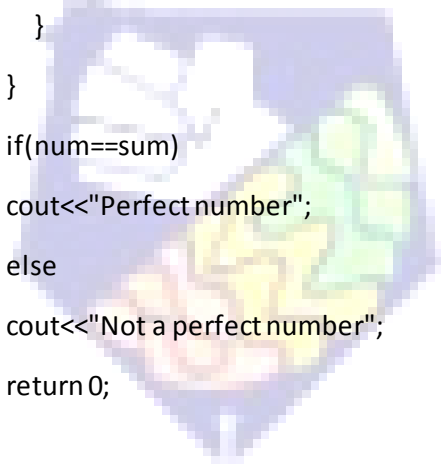
Method 2

```cpp
#include <iostream>
#include<math.h>
using namespace std;
int main()
{
    int i,num,sum=0;
    cout<<"Enter a number: ";
```

```
cin>>num;

for(i=1;i<=sqrt(num);i++)

{

    if (num%i==0)

    {

        if(i==1)

            sum=sum+i;

        else if(i==num/i)

            sum=sum+i;

        else

            sum=sum+i+num/i;

    }

}

if(num==sum)

cout<<"Perfect number";

else

cout<<"Not a perfect number";

return 0;

}
```
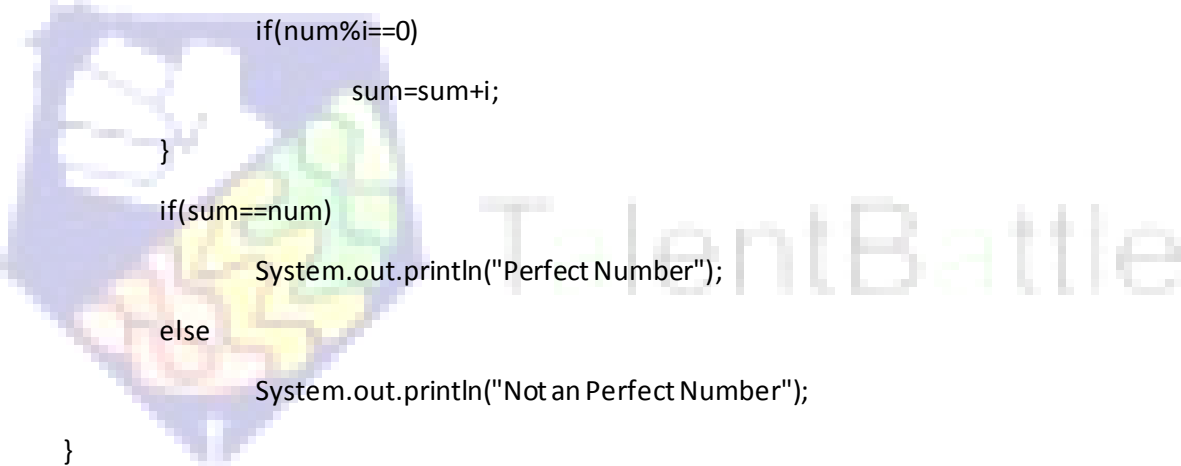
Java

```java
import java.util.Scanner;

public class Main
{
        public static void main(String[] args) {
                Scanner sc=new Scanner(System.in);
                System.out.print("Enter a number: ");
                int num=sc.nextInt();
                int sum=0;
                for(int i=1;i<num;i++)
                {
                        if(num%i==0)
                                sum=sum+i;
                }
                if(sum==num)
                        System.out.println("Perfect Number");
                else
                        System.out.println("Not an Perfect Number");
        }
}
```

Python

```python
num=int(input("Enter a number: "))
Sum=0
for i in range(1,num):
    if num%i==0:
        Sum=Sum+i
if(Sum==num):
    print("Perfect Number")
else:
    print("Not a perfect number")
```