

A strong Number is a number whose sum of the factorial of its digits equals the number itself.

145

$$1! = 1$$

$$4! = 24$$

$$5! = 120$$

Sum =  $1 + 24 + 120 = 145 \rightarrow$  strong number.

```
#include <stdio.h>
```

```
int main() {
```

```
    int num, temp, digit;
```

```
    long long fact, sum = 0;
```

```
    printf("Enter a number:");
```

```
    scanf("%d", &num);
```

```
    temp = num;
```

```
    while (temp > 0) {
```

```
        digit = temp % 10;
```

```
        fact = 1;
```

```
        for (int i=1; i<=digit; i++) {
```

```
            fact *= i;
```

```
}
```

```
        sum += fact;
```

```
        temp /= 10;
```

```
}
```

```
    if (sum == num)
```

```
        printf("%d is a strong Number.\n", num);
```

```
    else
```

```
printf("%d is NOT a strong Number.\n", num);
return 0;
}
```

## Output

Enter a number : 145

145 is a strong Number.

2) Perfect Number :- A perfect Number is a number is equal to the sum of its proper divisors.

6 → Divisors : 1, 2, 3 →  $1+2+3=6$

28 → Divisors : 1, 2, 4, 7, 14 → sum = 28.

```
#include <stdio.h>
```

```
int main()
```

```
{ int num, sum = 0;
```

```
printf("Enter a number : ");
```

```
scanf("%d", &num);
```

```
for (int i = 1; i <= num / 2; i++) {
```

```
if (num % i == 0) {
```

```
sum += i;
```

```
}
```

```
if (sum == num)
```

```
printf("%d is a perfect Number.\n", num);
```

```
else
```

```
printf("%d is NOT a perfect Number.\n", num);
```

```
return 0;
```

```
}
```

enter a number : 28. 28 is a perfect Number