

main.c



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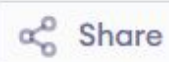
Output

```
1 //DAY 17
2 //Q33
3 #include <stdio.h>
4 #include <math.h>
5 int main() {
6     int num, original, remainder, n = 0;
7     double sum = 0;
8
9     printf("Enter a number: ");
10    scanf("%d", &num);
11
12    original = num;
13
14    int temp = num;
15    while (temp != 0) {
16        temp /= 10;
17        n++;
18    }
19    temp = num;
20    while (temp != 0) {
21        remainder = temp % 10;
22        sum += pow(remainder, n);
23        temp /= 10;
24    }
25
26    if ((int)sum == original) {
27        printf("%d is an Armstrong number.\n", original);
28    } else {
29        printf("%d is not an Armstrong number.\n", original);
30    }
31    return 0;
32 }
```

Enter a number: 153
153 is an Armstrong number.

=== Code Execution Successful ===

main.c



Run

Output

```
1 //DAY 17
2 //Q34
3 #include <stdio.h>
4
5 int main() {
6     int num, i, isPrime = 1;
7
8     printf("Enter a number: ");
9     scanf("%d", &num);
10
11     if (num <= 1) {
12         isPrime = 0;
13     } else {
14         for (i = 2; i <= num / 2; i++) {
15             if (num % i == 0) {
16                 isPrime = 0; // divisible by i, not prime
17                 break;
18             }
19         }
20     }
21
22     if (isPrime) {
23         printf("%d is a prime number.\n", num);
24     } else {
25         printf("%d is not a prime number.\n", num);
26     }
27
28     return 0;
29 }
```

Enter a number: 7
7 is a prime number.

=== Code Execution Successful ===