

main.py

```
6 if n % 2 == 1:
7     x = np.pad(x, (0, 1), mode='constant')
8     y = np.pad(y, (0, 1), mode='constant')
9 m = int(np.ceil(n / 2))
10 a = x[: m, : m]
11 b = x[: m, m:]
12 c = x[m:, : m]
13 d = x[m:, m:]
14 e = y[: m, : m]
15 f = y[: m, m:]
16 g = y[m:, : m]
17 h = y[m:, m:]
18 p1 = strassen_algorithm(a, f - h)
19 p2 = strassen_algorithm(a + b, h)
20 p3 = strassen_algorithm(c + d, e)
21 p4 = strassen_algorithm(d, g - e)
22 p5 = strassen_algorithm(a + d, e + h)
23 p6 = strassen_algorithm(b - d, g + h)
24 p7 = strassen_algorithm(a - c, e + f)
25 result = np.zeros((2 * m, 2 * m), dtype=np.int32)
26 result[: m, : m] = p5 + p4 - p2 + p6
27 result[: m, m:] = p1 + p2
28 result[m:, : m] = p3 + p4
29 result[m:, m:] = p1 + p5 - p3 - p7
```

input

Matrix multiplication result:

```
[[-1  0  0]
 [ 0 -1  0]
 [ 0  0 -1]]
```



main.c

```
1 #include <stdio.h>
2 void search(int [], int, int, int);
3 void sort(int [], int);
4 int main()
5 {
6     int key, size, i;
7     int list[25];
8     printf("Enter size of a list: ");
9     scanf("%d", &size);
10    printf("Enter elements\n");
11    for(i = 0; i < size; i++)
12    {
13        scanf("%d", &list[i]);
14    }
15    sort(list, size);
16    printf("\n");
17    printf("Enter key to search\n");
18    scanf("%d", &key);
19    search(list, 0, size, key);
20 }
21 void sort(int list[], int size)
22 {
23     int temp, i, j;
24     for (i = 0; i < size; i++)
```

input

Enter key to search

4

Key found

at index 3

...Program finished with exit code 0

Press ENTER to exit console



```

1  #include <stdio.h>
2  #include <limits.h>
3  #define V 5
4  int minKey(int key[], int mstSet[]) {
5      int min = INT_MAX, min_index;
6      int v;
7      for (v = 0; v < V; v++)
8          if (mstSet[v] == 0 && key[v] < min)
9              min = key[v], min_index = v;
10
11     return min_index;
12 }
13 int printMST(int parent[], int n, int graph[V][V]) {
14     int i;
15     printf("Edge    Weight\n");
16     for (i = 1; i < V; i++)
17         printf("%d - %d    %d \n", parent[i], i, graph[i][parent[i]]);
18 }
19 void primMST(int graph[V][V]) {
20     int parent[V];
21     int key[V], i, v, count;
22     int mstSet[V];
23     for (i = 0; i < V; i++)
24         key[i] = INT_MAX, mstSet[i] = 0;
25     key[0] = 0;
26     parent[0] = -1;

```

Edge Weight

```

0 - 1    2
1 - 2    3
0 - 3    6
1 - 4    5

```

input





+ 171K

main.c

```
1  #include<stdio.h>
2  long int multiplyNumbers(int n);
3  int main() {
4      int n;
5      printf("Enter a positive integer: ");
6      scanf("%d",&n);
7      printf("Factorial of %d = %ld", n, multiplyNumbers(n));
8      return 0;
9  }
10
11 long int multiplyNumbers(int n) {
12     if (n>=1)
13         return n*multiplyNumbers(n-1);
14     else
15         return 1;
16 }
17
```

input

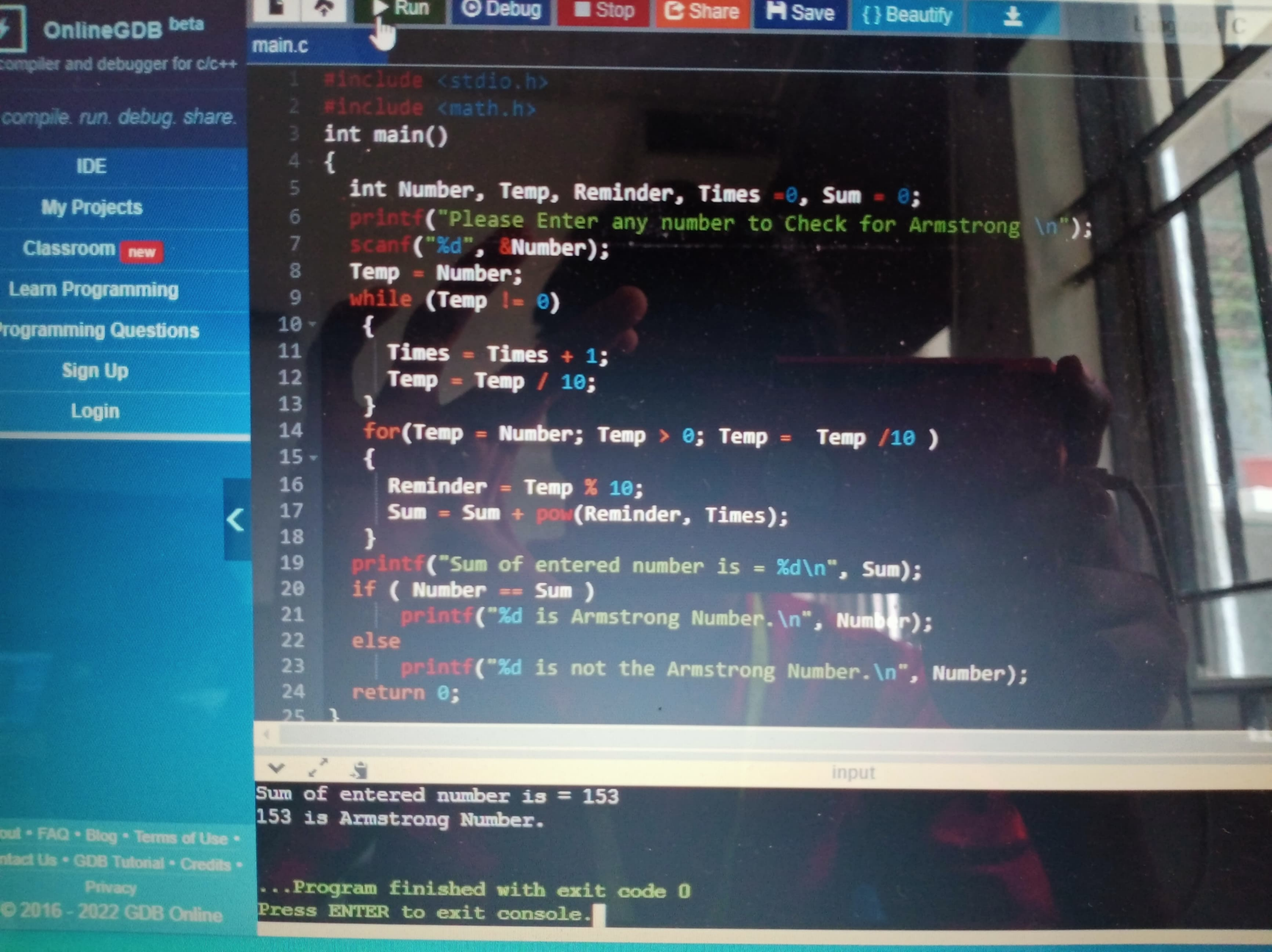
Enter a positive integer: 5

Factorial of 5 = 120

...Program finished with exit code 0

Press ENTER to exit console.





main.c

```
1  #include <stdio.h>
2  #include <math.h>
3  int main()
4  {
5      int Number, Temp, Reminder, Times = 0, Sum = 0;
6      printf("Please Enter any number to Check for Armstrong \n");
7      scanf("%d", &Number);
8      Temp = Number;
9      while (Temp != 0)
10     {
11         Times = Times + 1;
12         Temp = Temp / 10;
13     }
14     for(Temp = Number; Temp > 0; Temp = Temp / 10 )
15     {
16         Reminder = Temp % 10;
17         Sum = Sum + pow(Reminder, Times);
18     }
19     printf("Sum of entered number is = %d\n", Sum);
20     if ( Number == Sum )
21         printf("%d is Armstrong Number.\n", Number);
22     else
23         printf("%d is not the Armstrong Number.\n", Number);
24     return 0;
25 }
```

input

Sum of entered number is = 153

153 is Armstrong Number.

...Program finished with exit code 0

Press ENTER to exit console.