

Code:

```
import re
keyword =
['break','case','char','const','continue','default','do','int','else','enum','extern','float','for','goto','if','long','register','return','short','signed','sizeof','static','switch','typedef','union','unsigned','void','volatile','while','range']
built_in_functions = ['clrscr()','printf','scanf','getch()','main()']
header_file_func = ['<stdio.h>','<conio.h>','<stdlib.h>']
operators = ['+','-','*','/','%','=','>','<','>','=','&&','||','!','&','|','^','~','>>','<<','=','+=','-=','=']
specialsymbol = ['@','#','$','%','_','!']
separator = [',',':',';','"\\n","\\t','{','}','(',')','[',']']
file = open('cprogram.txt','r+')
contents = file.read()
splitCode = contents.split() #split program in word based on space
length = len(splitCode) # count the number of word in program
k = 0
bi = 0
h = 0
o = 0
ss = 0
s = 0
for i in range(0,length):
    if splitCode[i] in keyword:
        print("Keyword -->",splitCode[i])
        k=k+1
        continue
    if splitCode[i] in operators:
        print("Operators --> ",splitCode[i])
        o=o+1
        continue
    if splitCode[i] in specialsymbol:
        print("Special Operator -->",splitCode[i])
        ss=ss+1
        continue
    if splitCode[i] in header_file_func:
        print("Header File Functions -->",splitCode[i])
        h=h+1
        continue
    if splitCode[i] in built_in_functions:
        print("Built_in Function -->",splitCode[i])
        bi=bi+1
        continue
    if splitCode[i] in separator:
        print("separator -->",splitCode[i])
        s=s+1
        continue
print("Number of separator: ", s)
```

```
print("Number of built in function: ", bi)
print("Number of header function: ", h)
```

Input:

```
#include <stdio.h>

int main() {

    int a=5;

    int b=2;

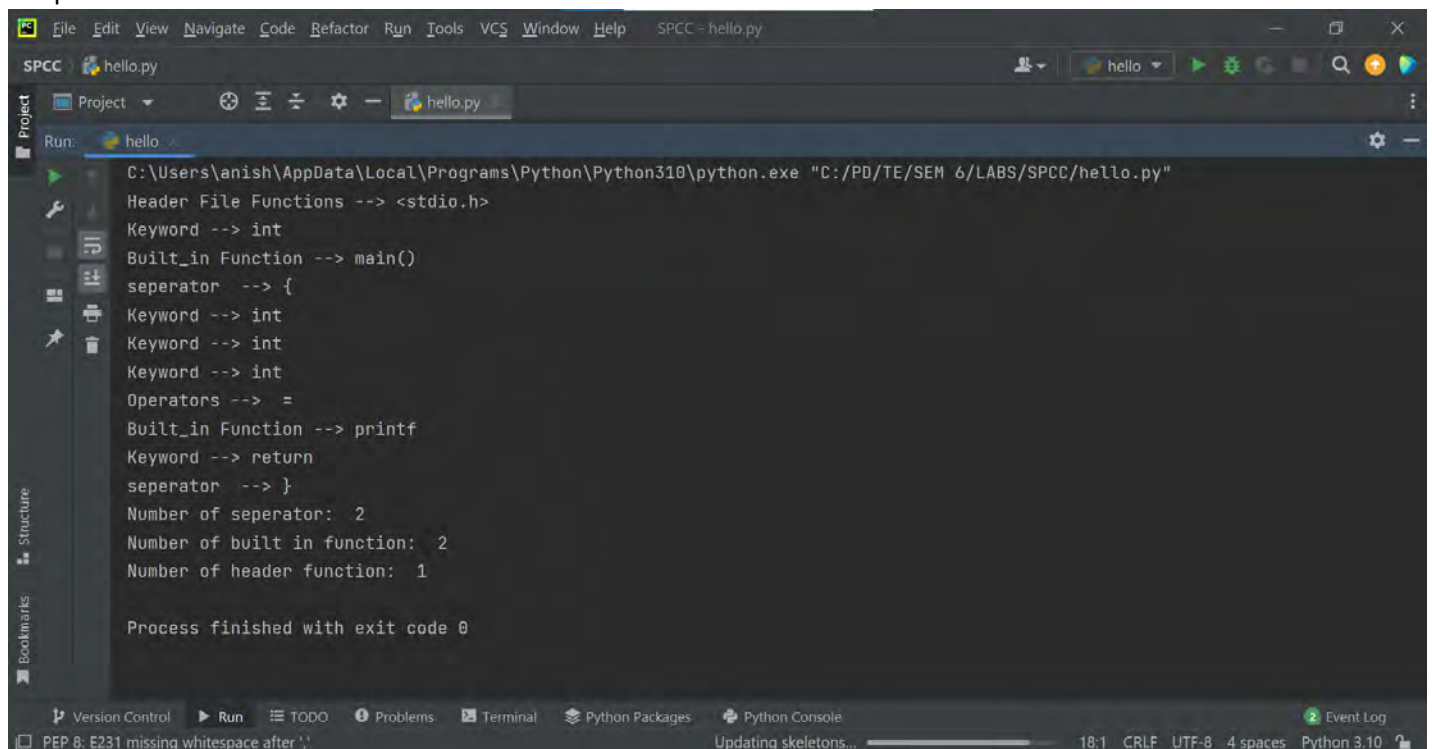
    int c = a+b;

    printf ("Hello, World! ");

    return c;

}
```

Output:



```
SPCC - hello.py
Run: hello
C:\Users\anish\AppData\Local\Programs\Python\Python310\python.exe "C:/PD/TE/SEM 6/LABS/SPCC/hello.py"
Header File Functions --> <stdio.h>
Keyword --> int
Built_in Function --> main()
seperator --> {
Keyword --> int
Keyword --> int
Keyword --> int
Operators --> =
Built_in Function --> printf
Keyword --> return
seperator --> }
Number of seperator: 2
Number of built in function: 2
Number of header function: 1

Process finished with exit code 0
```