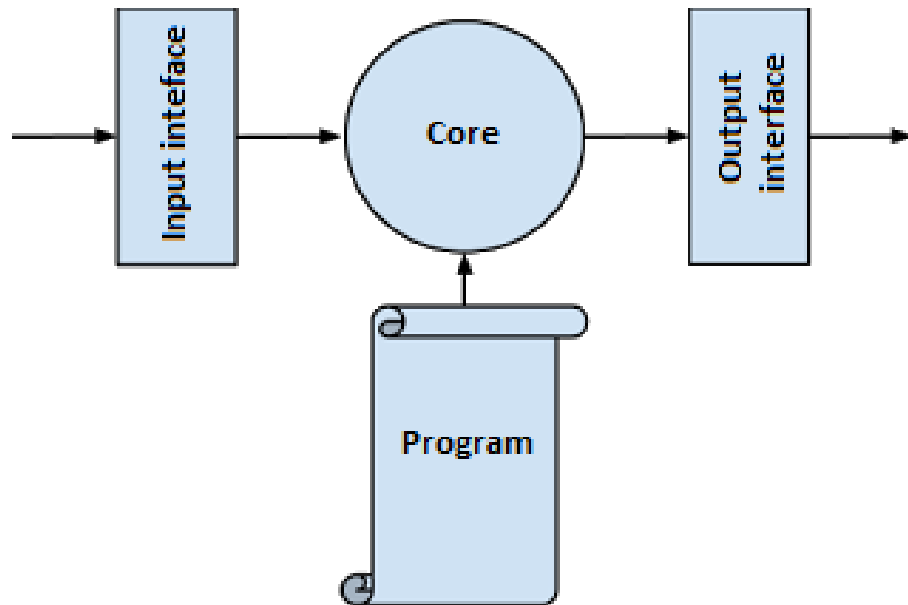


# Интернет вещей

Управление  
интерпретацией  
программ

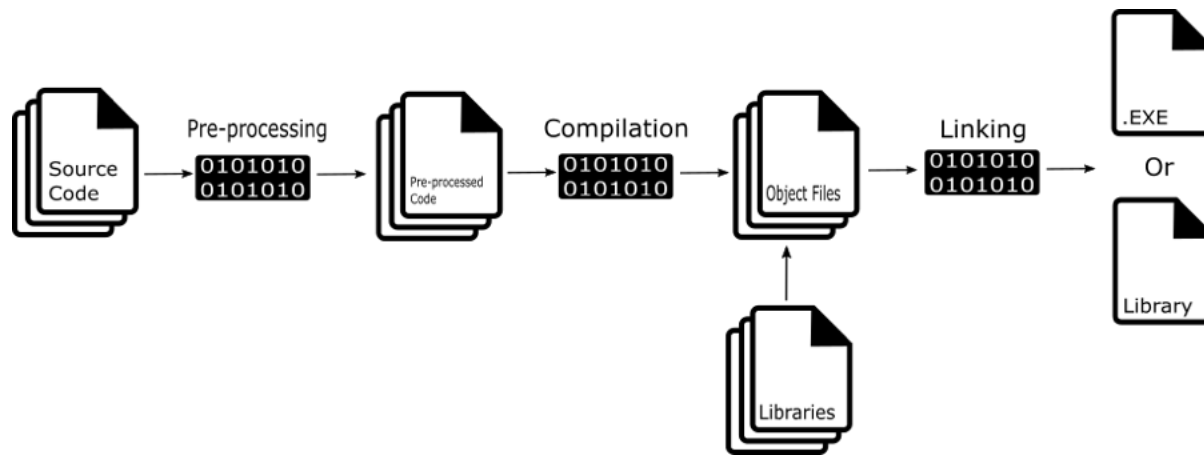
# Программа

Определяет поведение системы в виде последовательности инструкций, следующих одна за другой.



1. *Выполненная программа*
2. *Интерпретируемая программа*

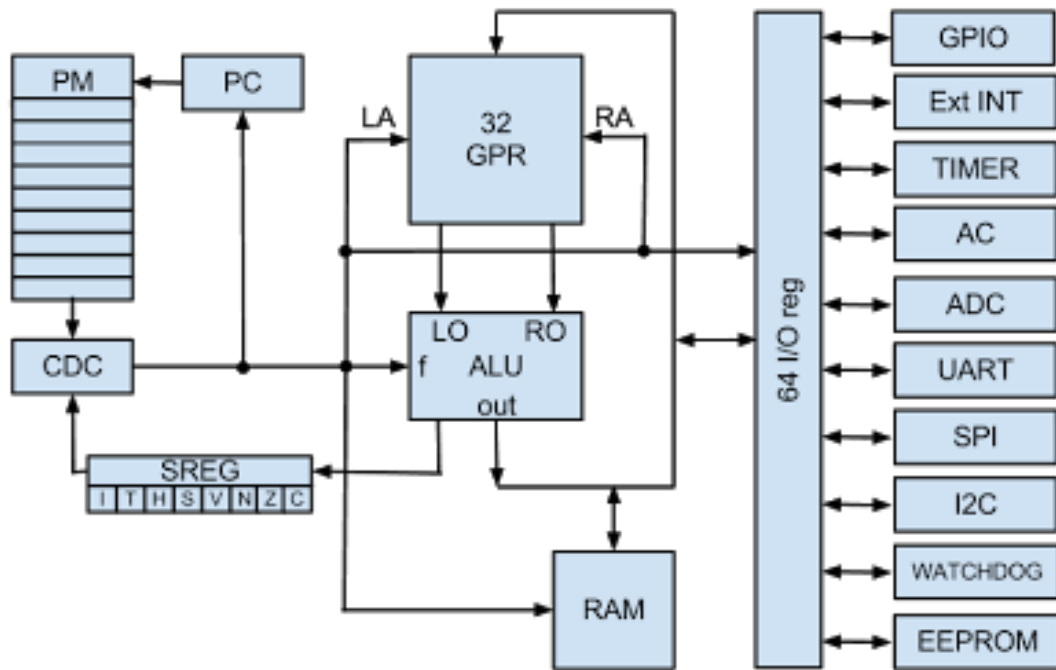
# Выполненная программа



```
main:
0000025c: F1AD0D10 SUB.W      R13, R13, #16
12      array[5] = '5';
00000260: 2035     MOV       R0, #0x35
00000262: F88D0005 STRB.W    R0, [R13, #5]
13      y = '1';
00000266: 2031     MOV       R0, #0x31
00000268: F88D000C STRB.W    R0, [R13, #12]
14      array[10] = array[5] + y;
0000026c: F89D1005 LDRB.W    R1, [R13, #5]
00000270: F89D000C LDRB.W    R0, [R13, #12]
00000274: 1840     ADD       R0, R0, R1
00000276: F88D000A STRB.W    R0, [R13, #10]
16      return 0;
0000027a: 2000     MOV       R0, #0x0
17      }
```

<https://medium.com/better-programming/learn-how-to-compile-a-c-program-382c4c690bdc>

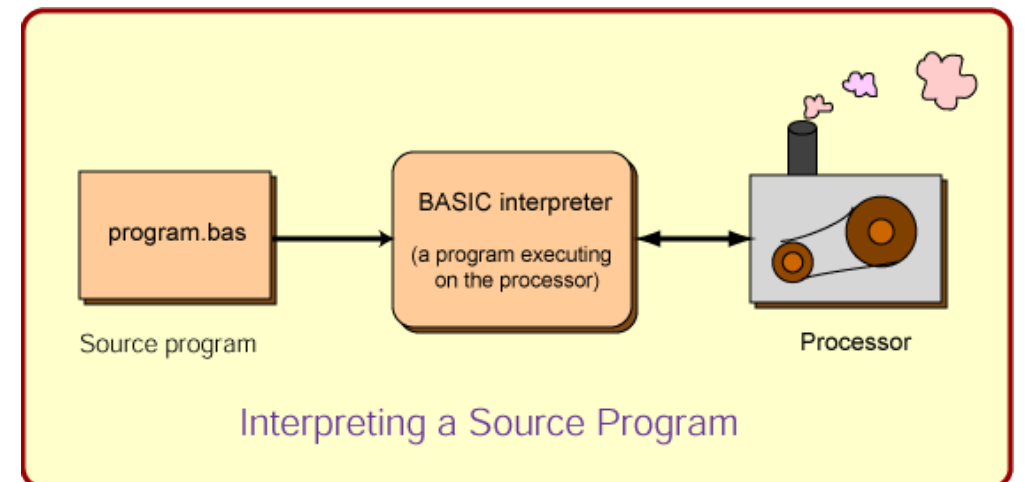
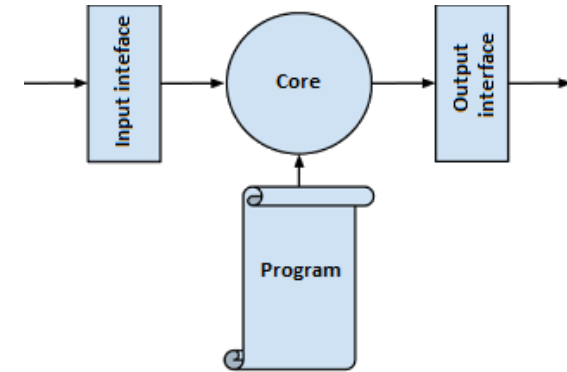
# Выполненная программа



	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
	4-bit Opcode				Source Register				Ad	b/w	As	Destination Register					
0xc000:	4031	0100	0000	0011	0001												mov.w #0x0400,r1
0xc002:	0400																
0xc004:	40b2	0100	0000	1011	0010												mov.w #0x5a80 ,& 0x120
0xc006:	5a80																
0xc008:	0120																
0xc00a:	427f	0100	0010	0111	1111												mov.b #8,r15
0xc00c:	12b0	0001	0010	1011	0000												call.w #0xc012
0xc00e:	c012																
0xc010:	3ffc	0011	1111	1111	1100												jmp 0xc00a
0xc012:	831f	1000	0011	0001	1111												sub.w #1,r15
0xc014:	23fe	0010	0011	1111	1110												jne 0xc012
0xc016:	4130	0100	0001	0011	0000												mov.w @r1+ ,r0

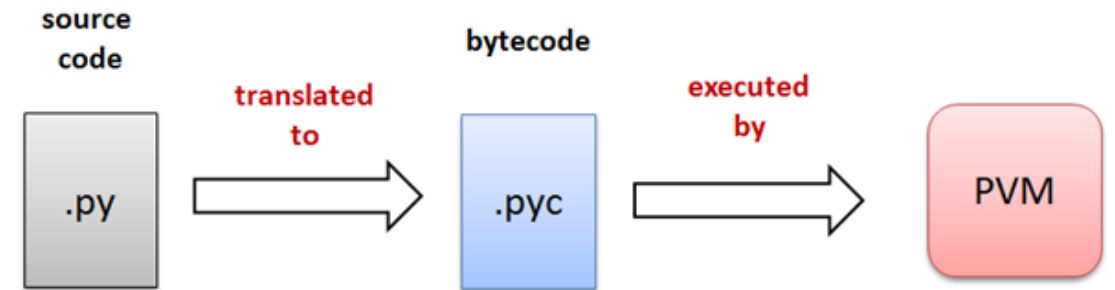
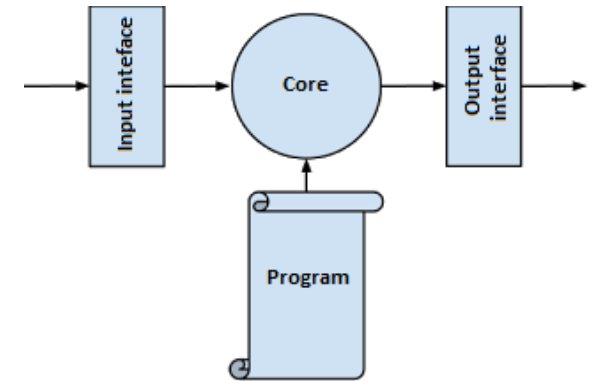
# Интерпретируемая программа - BASIC

```
10 INPUT "What is your name: ", U$
20 PRINT "Hello "; U$
30 INPUT "How many stars do you want: ", N
40 S$ = ""
50 FOR I = 1 TO N
60 S$ = S$ + "*"
70 NEXT I
80 PRINT S$
90 INPUT "Do you want more stars? ", A$
100 IF LEN(A$) = 0 THEN GOTO 90
110 A$ = LEFT$(A$, 1)
120 IF A$ = "Y" OR A$ = "y" THEN GOTO 30
130 PRINT "Goodbye "; U$
140 END
```



# Интерпретируемая программа - Python

```
x = 34 - 23           # A comment.  
y = "Hello"         # Another one.  
z = 3.45  
if z == 3.45 or y == "Hello":  
    x = x + 1  
    y = y + " World" # String concat.  
print x  
print y
```



# MicroPython



<https://docs.micropython.org/en/latest/esp32/quickref.html>

# Интерпретатор G-кода

Fan speed setting  
Nozzle travel speed (without extrusion)  
Nozzle printing speed (with extrusion)  
X, Y Coordinates

```
;Layer count: 25  
;LAYER:0  
M107  
G0 F9000 X52.235 Y55.800 Z0.300  
;TYPE:SKIRT  
G1 F2340 X56.093 Y55.800 E0.18815  
G1 X56.346 Y55.605 E0.20373  
G1 X57.299 Y55.078 E0.25684  
G1 X58.540 Y54.758 E0.31934  
G1 X59.404 Y54.719 E0.36152  
G1 X60.320 Y53.688 E0.42878
```

Layer height  
Extrusion length

<https://all3dp.com/g-code-tutorial-3d-printer-gcode-commands/>



# Интерпретатор Морзе

## International Morse Code

A	·-·	N	·-·-	1	·-·-·-·	.	·-·-·-·	=	·-·-·-·
B	·-·-·	O	·-·-·-	2	·-·-·-·-	,	·-·-·-·	+	·-·-·-·
C	·-·-·-·	P	·-·-·-·	3	·-·-·-·-	?	·-·-·-·	-	·-·-·-·
D	·-·-·	Q	·-·-·-·-	4	·-·-·-·-·	!	·-·-·-·	\$	·-·-·-·
E	·	R	·-·-·	5	·-·-·-·-·	'	·-·-·-·	@	·-·-·-·
F	·-·-·-·	S	·-·-·-·	6	·-·-·-·-·-	"	·-·-·-·		
G	·-·-·	T	·-·-·	7	·-·-·-·-·-	(	·-·-·-·		
H	·-·-·-·	U	·-·-·-·	8	·-·-·-·-·-	)	·-·-·-·		
I	·-·	V	·-·-·-·	9	·-·-·-·-·-	&	·-·-·-·		
J	·-·-·-·	W	·-·-·-·	0	·-·-·-·-·-	:	·-·-·-·		
K	·-·-·	X	·-·-·-·			;	·-·-·-·		
L	·-·-·-·	Y	·-·-·-·			/	·-·-·-·		
M	·-·-·	Z	·-·-·-·			-	·-·-·-·		

SOS	·-·-·-·-·-·-·	Break	·-·-·-·-·
New Line	·-·-·-·	Closing	·-·-·-·-·-·-·
New Page	·-·-·-·-·	Shift to Wabun code	·-·-·-·-·-·-·
New Paragraph	·-·-·-·-·-·-·	End of contact	·-·-·-·
Attention	·-·-·-·-·	Understood	·-·-·-·-·
Error	·-·-·-·-·-·-·	Invitation for named station to transmit	·-·-·-·-·-·-·
Wait	·-·-·-·-·	Invitation for any station to transmit	·-·-·-·-·

