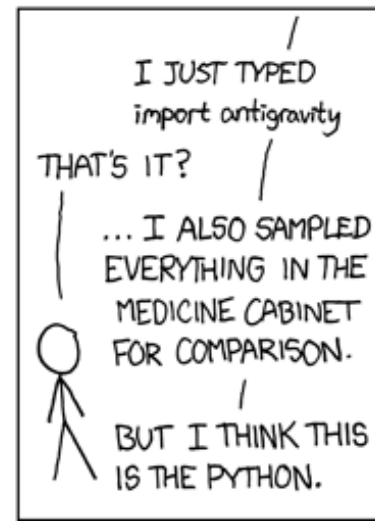
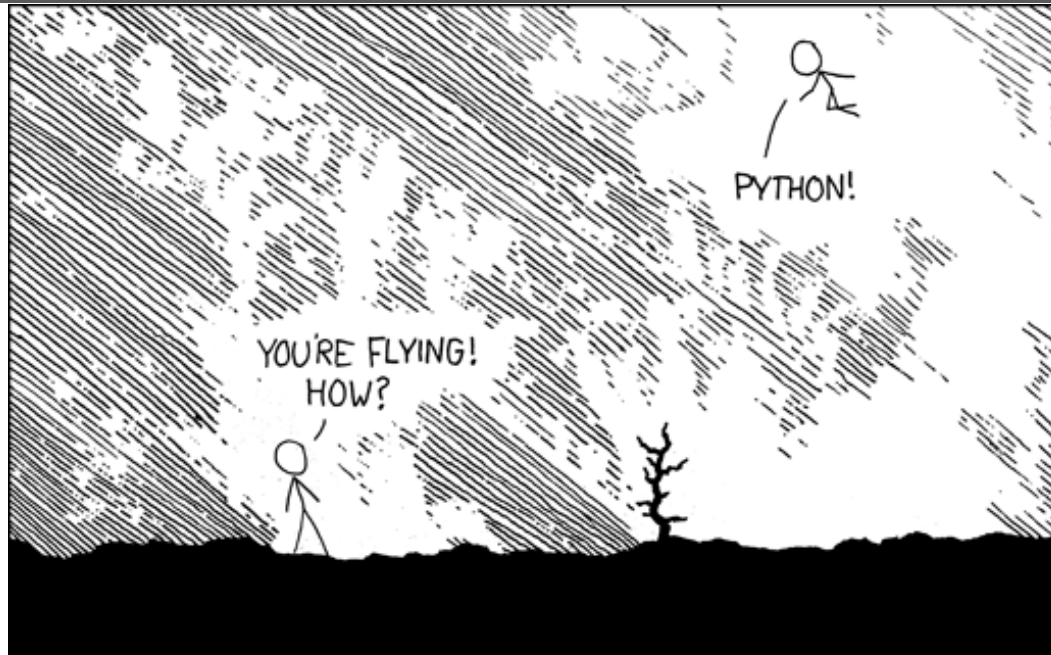


The single most important skill for a computer scientist [engineer] is problem solving. Problem solving means the ability to formulate problems, think creatively about solutions, and express a solution clearly and accurately. As it turns out, the process of learning to program is an excellent opportunity to practice problem-solving skills.

- From “Think Python” by Allen Downey

Python

<https://xkcd.com/353/>



Hello World

- Python

```
print("Hello world")
```

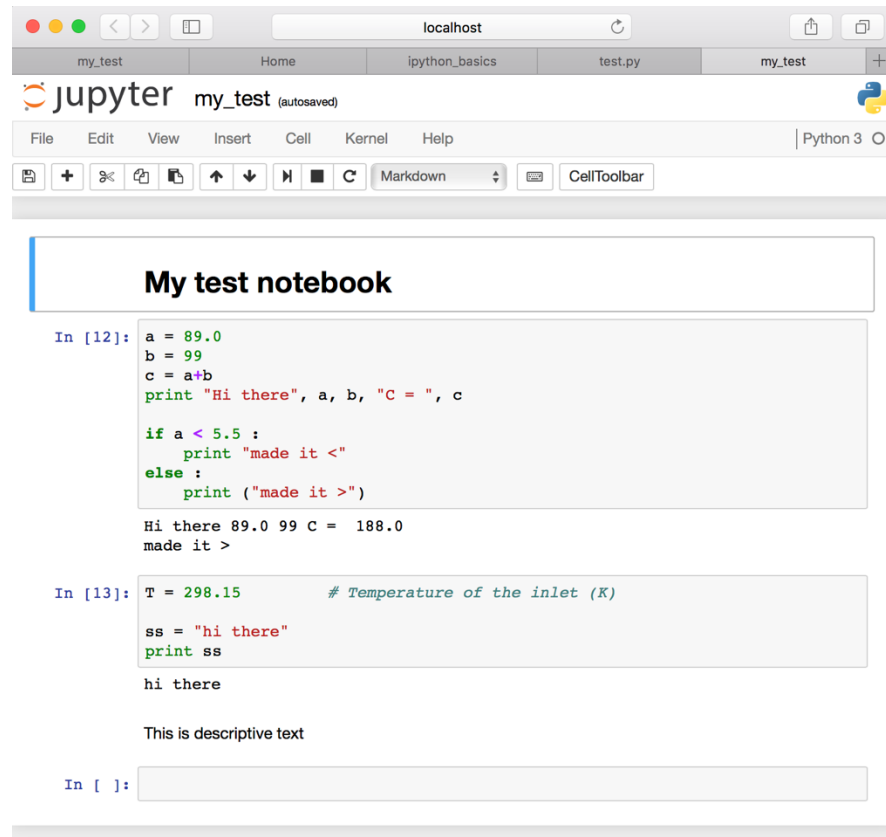
- C++

```
#include <iostream>
using namespace std;

int main() {
    cout << "Hello world\n";
    return 0;
}
```

Programing

- Environment
- Syntax
- Variables
- Arrays
- Loops
- Conditionals
- Functions
- Classes
- Modules



The screenshot shows a Jupyter Notebook interface in a web browser. The browser's address bar shows 'localhost'. The notebook has tabs for 'my_test', 'Home', 'ipython_basics', 'test.py', and 'my_test'. The notebook title is 'my_test (autosaved)'. The menu bar includes 'File', 'Edit', 'View', 'Insert', 'Cell', 'Kernel', and 'Help'. The toolbar shows icons for saving, adding cells, and other functions. The notebook content is titled 'My test notebook'.

Cell 1:

```
In [12]: a = 89.0
         b = 99
         c = a+b
         print "Hi there", a, b, "C = ", c

         if a < 5.5 :
             print "made it <"
         else :
             print ("made it >")
```

Output:

```
Hi there 89.0 99 C = 188.0
made it >
```

Cell 2:

```
In [13]: T = 298.15      # Temperature of the inlet (K)
         ss = "hi there"
         print ss
```

Output:

```
hi there

This is descriptive text
```

Cell 3:

```
In [ ]:
```

Roadmap...

