



IIT Madras

ONLINE DEGREE

Programming in Python
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Conclusion: FAQs

I hope you enjoyed coding with us as and always coding involves practice as we have been stressing, programming involves you to code very frequently as much as possible and not just code whatever, we tried coding the terminal, you probably were parallelly coding but it is also important that you code a little more than what we have tried coding this week, that is the only way in which you will get comfortable with programming.

So, here we are, we will address a few frequently asked questions rather concerns that a student who is trying to program or learn programming for the first time faces, although python is very-very-very programmer friendly, I did not mean to exaggerate it, indeed is the most programmer friendly language that I am aware of from my little experience of programming from the past 15 - 20 years.

I find Python really-really easy to understand, I wish python was there, was the first programming language that I learned, unfortunately it was not. So, here are some questions which I will go one by one. Feel free to ask your questions on the forum in case you have more questions than what we have addressed.

I cannot remember the syntax, I find it difficult to remember several keywords that Python requires, this is the question. So, to address this, yes, I am with you people. Of course, it is going to be difficult, in fact, Python is a lot more than what one can understand, maybe even in a lifetime, I mean, so is any programming language, but then try to see the analogy with any other language, look at your own mother tongue.

Do you know all the words in your mother tongue or you do you think your vocabulary is full in the sense that there is no word left out? Obviously not, but then you are aware of most of the words, which is enough for you to converse in your day-to-day life. Similarly, as with Python it is enough if you learn a few things, I mean, which will help you open up the world of possibilities eventually.

But then as you are learning these few things you will stumble upon the exact syntax, I mean, you will, you would not know how to write a piece of code for instance we discussed strings, there were a few functions that we used, there were a few keywords that we used to sort of manipulate strings. It was not very easy for us to remember them.

I mean, but then with time you will start remembering them and you always have internet to look up, you can even have a small cheat code, I mean, the cheat book, cheat sheet that you can keep so that you can write down all the syntax that is frequently used and then look them up as often as it is required, but then in an actual you need not worry, this is a very-very frequently occurring problem, everybody complains that it is too much to remember, but with time you will start remembering it.

I get errors when I am programming and I find them very irritating – So, everybody does get errors, even people who are very proficient with programming tend to miss out a few things when they are coding. Syntax errors are very common as you saw, in a simple print statement if you miss out on closing the bracket it throws up an error.

This is very common, you should get used to it, nobody is a perfect programmer and you will indeed make errors here and there. And Python, in fact, helps you by telling you what exactly is the error there, not always though, but most of the times you will get to know where you are making an error and you can rectify it immediately. So, to answer your question this is completely normal, you should get used to it.

A programmer's life involves fixing the errors more than writing the code, so this is how a programmer's life is and you are entering into the world of programming, so you should get used to not getting upset with errors. Why are we learning Python why not any other language xyz? That is a good question. Of course, we are free to teach or learn any language, but then the reason as we stated.

The reason why we took Python is that Python is very easy to learn, easy on the mind for a person who is trying to program for the first time, very powerful, much sought after, the entire world today is talking in the language of Python and most of the jobs are open for python programmers in my humble observation.

And most importantly I would say if I were to restart, I mean if I were to start my student hood and assuming I did not know programming, I would definitely start with Python, for a

simple reason that most of the open source softwares today, assuming you want to do something creative and you need to look up if someone has done that already, mostly that program will be in Python, it will not be in any other language.

This is my observation. So, which means that if you learn Python, you have millions and millions of open source projects available for you, millions and millions of library functions readily available for you to pick and then simply use. That is probably the reason why we thought python would be a good programming language to start.

But then one is free to learn any other programming language, but the point is once you learn one programming language, trying to learn a second programming language is not very difficult, it is just like learning a second language, first language as an infant, you and me probably found it very difficult, it took a long time, but then an immediate second language was not really very difficult.

So, once you learn Python for instance, if you do not know C or C plus plus, you learn Python really well, start coding, understand what is logical thinking, how to, what is programming logic and eventually you will see that learning C and C plus plus is only a matter of knowing the equivalent syntax in that language, which you have already learned.

So, Python that way gets you started as a beginner. I do not think that it is easier for one to learn a programming language like Pascal or C or C plus plus, Python is relatively easier, that is the reason why we thought one should learn Python and that is the reason why we are teaching you all Python as the first programming language.

How do I efficiently learn coding? How do I get better at coding? So, the answer to this is as and always how do I get better with a sport, let us say table tennis or chess or let us say badminton, the answer has always been practice makes one perfect. So, you may want to practice as obvious as it can get.

But then while practicing there are few tips that we can give you. Number one is it is important for one to type a piece of code for a particular question repeatedly, that is one skill that I think would come very handy for a beginner wherein just in case you are given a question to let us say sort a few numbers, you will be seeing these programs eventually, although we did not cover it in the first week.

You will be seeing sorting of numbers is, something that is taught in the first few days of programming, you will see that sorting numbers, writing a piece of code can actually be daunting for a beginner, but then once you finish writing the code, you should not move to the next program in my humble opinion, you should open the browser, open the compiler and open the editor and then type the code afresh.

You should repeatedly do a code for the same question multiple times, I mean, of course, by not looking up the code that you typed already, but assuming that you have forgotten the code you should try redoing it. This is a very nice way in learning how to get good at coding for a beginner, especially the reason is the following.

The reason is we address the question of syntax, remembering the syntax, when you are typing a piece of code there are two things that makes your life difficult, one is the syntax, remembering them and second thing is the logic itself. First one you will get used to with time, you will understand what is what, you will understand Python keywords and you will be proficient with programming, but then logic it is very question dependent.

You also will learn logic with time, logical thinking also comes with time, once, it is like seasoning your mind, you will do it slowly, but then the first one, the syntax is actually memory based comes with time, but logic takes more time for one to learn. But when you do the same piece of question, same question multiple times, you will, number one, you will not worry about the syntax, number two, you will worry only about the logic.

That is the reason why you want to solve the same problem multiple times. So, how do we go about it? Take a question, try writing a piece of code and then open the editor once again and do it once more and do it three or four times and try to take a program that is slightly longish, I mean, you do not want to do a two line code multiple times, it does not make sense. This is a good way in which you can get good at programming with time.