**5 Mistakes to Avoid When First Learning to Program**

Fast progress in the start doesn’t mean an efficient learning process



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We live in a world of technology; everywhere you look, you will find a device or tool that uses an algorithm or a program to work. Technology has become a vast, inseparable part of our lives from our phones, smart TVs, watches, and even ovens and washing machines. With technology interwoven with every aspect of our lives, many are curious about the field or understand how things work.

Tech as a career path can be very satisfying, lucrative, and exciting. With a tech career, you get the chance to participate in building the future while maintaining the present. That was one of the core ideas that attracted me to this field. Many people every day are considering getting into the tech field, regardless of the exact branch. Whether you are considering being a web dev, an app dev, a data scientist, or even a researcher, the first step you will need to take is to learn to program.

Programming is the first and foremost building block for getting into the data science field with all its branches. Programming, in my opinion, is a great skill to learn just by itself, regardless of the end-goal application. Learning to program will teach you how to think of a problem structurally and articulate it in simple terms to make the computer execute it.

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In this article, I will go through 5 mistakes that I often see my students make when they first start learning to program. Mistakes that I try to help them avoid so they can learn programming the right way, or, if I may say, the way that allows them to learn any programming language with ease and master whichever branch they choose to pursue next.

**№1: Skipping brainstorming**

When you are first presented with a programming problem, you start to think of a solution; once you do, you will probably stop and start implementing it. That’s here the first mistake that people make when they are learning to — I did it, too, at the beginning.

An essential step of solving any problem efficiently is to try to look at the problem from different perspectives and attempt to find other answers to that problem, and then examine these answers to narrow them down to the most efficient one or the one that you can implement quickly at your current skill level.

So, next time you have a new programming problem, take your time to think of multiple answers and remember, the simplest one is not always the first one you will think about.

**№2: Skip the old fashion pen and paper**

If you’re trying to learn programming the right way, you should never skip on solving the problem using a pen and paper or whiteboard approach first. I know that rush that one gets when they have the idea to solve a problem and how you’ll feel that you want to start coding in your answer. But, doing that will take away from you learning how to put together an algorithm.

When you have an answer in mind, I want you to take some time, to put that answer as a set of steps, logical steps from input to answer. In this stage, avoid using exact syntax, and focus on using ideas or concepts. That way, you’re trying your brain to think for any programming language rather than for a specific one.

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**№3: Memorize syntax**

This is related to the above mistake, and it’s one I would say is the most mistake done by beginners. So often we try to learn new skills, says programming, we choose a specific language to start with, for example, Python, C++, or Java.

Those three programming languages have some commonalities, but their syntax is definitely not identical. So, most of my students try to sit down and memorize the syntax for a specific programming language, memorize the functions, the different ways to do things, and the possible libraries.

They think by doing this, and they can efficiently solve any given problem because they can recall all the tools they need. But that’s not true, and it just forces you to think within a box of one programming language. So never memorize syntax; you can definitely Google things if you need to.

**№4: Not investing enough time learning the fundamentals**

Programming is essentially finding an efficient set of steps to solve a particular problem. This set of actions is what we can an algorithm. Learning how to articulate a problem into a set of steps is essentially how you learn to program. Take your time solving problems, just getting the steps for various problems before even thinking about writing code.

Once you’re comfortable writing algorithms, you can start thinking of putting your algorithms into code. In this stage, use pseudo-code as much as possible because if you master that, you can write code in any programming language you want.

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**№5: Rushing into applications**

This is the reason why people make all the previous 4 mistakes. When people start learning to program, you do it for a purpose. Usually, to get into any of the tech branches and to learn how to code is often among the first 5 steps of any branch learning journey.

So, when you’re learning the basics of programming, you’re trying to learn as fast as you can so you can get into the core of the field you are trying to get involved with. But, my advice here is to take your time learning to program the write why, because that will not only save you time in the future when you get to the advanced parts of the field but will also give you the freedom to change between tech fields if you wanted to in the future.

**Final Thoughts**

If you’re considering a career in data science, you will first need to learn how to program. When starting to learn to program, people always have the assumption that programming is complicated, or it’s just a tedious step to reaching the application-building skills level.

But, as a programming instructor, I always encourage my students to teach programming for the sake of learning programming first and then move on to applications. This mindset will allow them to focus on programming rather than consider it a step in the journey. Because once they embrace this mindset, they will be able to master programming and hence learn any branch of tech they want.

I have been teaching kids, teenagers, and adults to program for a little over 6 years now, and through these years, I noticed a pattern in what all my students tend to do, regardless of their age. This article explored 5 common mistakes that beginners often make when they first learn to program.

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These mistakes may help you learn to program in a specific programming language fast, but they will not allow you to understand it efficiently. Most importantly, these mistakes will prevent you from fully grasping the essence of programming and what it really means to write code.