How to Become a New Robotics Programmer

Hopefully from your experiences from the past three weeks, you have realized programming is not that hard. Anyone can program! Let's talk about how to be a real programmer.

1. Look for online video tutorials. For instance, there is a YouTube playlist of Blockly (The programming tool in which we dragged blocks around to piece together robot instructions) tutorials. Please watch it: https://www.youtube.com/playlist?list=PLEuGrYl8iBm4A4yrRcatGcK7q0od0LYov
2. Google your error, question, bugs etc. There are so many credible sources online that you can look at. Some of these sources for Java programming include but are not limited to:
    a. Stack Overflow - https://stackoverflow.com/
    b. Oracle Java Forum - https://community.oracle.com/community/java
    c. Java Forums - https://www.java-forums.org/forum.php

    The general guideline to using these forums is to google search your question directly, and if you see a search result from the above forums, then click on the link.

    For FTC programming specifically, there are some forums on which you could post your questions if they are not already asked by other programmers. Here are the FTC specific forums:

    a. FTC Forum - https://ftcforum.usfirst.org/forum/ftc-technology
    b. Chief Delphi - https://www.chiefdelphi.com/forums/forumdisplay.php?f=146
3. Programming is also a learning process like that of learning a new language. There are "dictionaries" for programmers called libraries. Here are some useful Java libraries:
    a. Oracle Java (The official Java library) - https://docs.oracle.com/javase/7/docs/api/
    b. FTC Javadoc (The FTC robotics programming library) - http://ftctechnh.github.io/ftc_app/doc/javadoc/index.html

    To navigate through a library, you need to first know what you are looking for, and start searching under that category. It is good for looking up method names and their corresponding functions.

4. There are also some robotics programming manuals online, but they are generally long and more challenging to understand. Here is an example: https://www.firstinspires.org/sites/default/files/uploads/resource_library/ftc/android-studio-tutorial.pdf
5. Don't ever be afraid to make mistakes! Programs crash all the time, and no one can guarantee to make perfect programs on the first try. Hang in there and there is nothing like the feeling of success after you finish a program. Good luck and congrats on being an official robotics programmer!