How to become Good Programmer

* Clarity in Basics

1. Ask Why and How.

* Good command over programming language

1. Use a programming language fluently
2. Well aware of the fundamental syntax, but also with standard libraries.

* Solutions oriented approach and an eye to detail

1. When we writing computer program we are training a machine what to do and what our brain is doing.
2. To do this, we should be able to frame the solution in exact way our brain works.
3. Once we frame the right algorithm, converting it into code is easy.
4. We cannot be a good speaker if we are just fluent in a language, we also need good content, and in programming algorithm is the content.

* Shortest path is the best path

1. Finding a solution is not a big deal, but finding the fastest one is.
2. We don’t need to visit Bangladesh, while travelling from New York to Washington DC. Same is when finding the solution, write code that solves the problem in minimum steps possible.

* Wasting resources is an sin

1. Code should not only be fastest but also use minimum memory and resources.
2. Reuse variables, destroy unused objects, close file and database connections which are not in use.

* If we fail to plan, we plan to fail

1. Writing code is implementation of a strategy, which should be planned beforehand.
2. Write the solution or algorithm and test it thoroughly before writing the code.

* Make it easy for others to understand

1. Make sure you will be able to understand after few months or years what’s done why, by using proper comments.

* Be aware of programming methodologies

1. Being aware of various problem solving approaches, like Dynamic Programming, Greedy Algorithm etc., helps us solve majority of problems.
2. Learning these approaches also helps we develop a thought process to classify problems and find optimal solution.
3. It’s always good to learn the solutions developed by masters of your domain.