

Prerequisites for the course

Let's start with some programming basics:

C++

- 1. Install C++
- 2. First Program Hello World in C++
- 3. <u>C++ datatypes</u>
- 4. Input Output
- 5. Operators
- 6. Loops
- 7. <u>Loops-2</u>
- 8. If-else
- 9. Functions
- 10. Arrays
- 11. Strings
- 12. <u>2-D array</u>
- 13. <u>Vectors</u>

Java

- Introduction
- 2. <u>Keywords in Java</u>
- 3. While loop
- 4. Do while loop
- 5. For loop
- 6. For each loop
- 7. <u>If else</u>
- 8. Main method in java
- 9. Data types
- 10. Arraylist in java
 - a. More resources

Python

- 1. Introduction 1
- 2. Intro 2
- 3. Basics
- 4. String, Lists, Tuples Introduction
- 5. Strings
- 6. Strings 2
- 7. Strings 3
- 8. <u>List</u>
- 9. <u>List 2</u>

Problems To Practice

You have to login to these respective websites to solve these problems. You can login using your google account.

- 1. https://practice.geeksforgeeks.org/problems/odd-or-even/0
- 2. https://leetcode.com/problems/two-sum/
- 3. https://leetcode.com/problems/palindrome-number/
- 4. https://leetcode.com/problems/fibonacci-number/
- 5. https://www.geeksforgeeks.org/python-program-for-factorial-of-a-number/
- 6. https://www.geeksforgeeks.org/program-for-nth-fibonacci-number/
- 7. https://www.hackerrank.com/challenges/simple-array-sum/problem
- 8. https://www.hackerrank.com/challenges/solve-me-first/problem
- 9. https://www.hackerrank.com/challenges/compare-the-triplets/problem
- 10. https://leetcode.com/problems/cells-with-odd-values-in-a-matrix
- 11. https://leetcode.com/problems/sort-array-by-increasing-frequency
- 12. https://leetcode.com/problems/intersection-of-two-arrays
- 13. https://www.programiz.com/c-programming/examples/palindrome-number
- 14. https://www.programiz.com/c-programming/examples/reverse-number
- 15. https://www.programiz.com/c-programming/examples/armstrong-number-interval
- 16. https://www.javatpoint.com/c-program-to-swap-two-numbers-without-using-third-var-iable
- 17. https://www.javatpoint.com/sum-of-digits-program-in-c
- 18. https://www.geeksforgeeks.org/c-program-find-area-circle/
- 19. https://www.geeksforgeeks.org/c-program-find-largest-element-array/
- 20. https://practice.geeksforgeeks.org/problems/reverse-digit/0

Some more resources for you to go through for more programming concepts:

- C (3 hours)
- C++ (1.5 hours)
- Java (2.5 hours)
- Python (1.5 hours)
- Javascript (1.5 hours)