

Intermediate Python Programming





Goal:

The hope of this 10 week course is to give complete beginners an introduction to more advanced Python topics. Students will learn skills such as recursion, 2D arrays and other subjects necessary to complete the Junior 4 problem of the Canadian Computing Competition.

Logistics:

Each class will be in the duration of 1hr and conducted on Zoom. Our instructors will usually present a powerpoint and give a 20-30min lecture. The remaining class time will be dedicated to analyzing solutions to problems or the instructor will do some live problem solving.

Resources:

Instructor Email:

python@codingpals.org

If there are any concerns or questions please feel free to reach out to our class email. We will try to answer all inquiries within 24 hours

Youtube Channel Link:

https://www.youtube.com/channel/UCH_EtolkXox8SucNOhuq8cw/videos

We highly recommend participants in this class to subscribe to our youtube channel and review all the problems. Coding Pals instructors have provided in depth tutorials and fun projects to look at.



Class Outline/Schedule

Class 1: Review class

- Hackerrank quiz to find weak topics
- Content review

Class 2: 2D Arrays

- Learn 2D Arrays
- Implementation of 2D Arrays

Class 3: Classes and Objects introduction

- Learn about what classes and objects are
- Learn how to write classes and objects in python
- Class members vs instance members

Class 4: Inheritance

- Learn object and class inheritance
- Learn properties and methods

Class 5: Apply objects and classes

- Learn string syntax and basics

Class 6: Recursion

- Learn function recursion
- Implement recursion

Class 7: DFS and BFS

- Understand DFS and BFS search
- Implement DFS and BFS

Class 8: Final Review Part I

- Higher dimensional arrays and classes

Class 9: Final Review Part II

- Recursion and algorithms

Class 10: Practice Contest/ Farewell

- 1hr Hackerrank Live Contest