# >>> CHAMPION

The Champion package serves as an excellent entry point for students aspiring to learn coding and develop basic applications. While a basic understanding of computers would be beneficial, it is not essential.

## PYTHON PROGRAMMING
### 13-15 Yrs| 24 Classes| 3 Months| 50 Minutes| Certificate of Achievement

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| This provides an excellent introduction to coding, covering the syntax used in the Python language, as well as working with logical statements, arrays, and loops. | • Computational Thinking<br>• Logical Thinking<br>• Skills to Create Simple Applications |

## LESSON PLAN

| Class | Topic | Class | Project |
|---|---|---|---|
| 1 | Introduction to Python | Working with Python and installation | |
| 2 | Introduction to Python | Students are introduced to Python in repl.it as a platform | Repl.it |
| 3 | Data types | Introduction to the concept to data types | Data conversion |
| 4 | Variables | Declaration and manipulation of variables | Password checker |
| 5 | Operators | Students learn different operators and how they are used to manipulate values of variables | OTP generator |
| 6 | Conditionals | Students learn the use of conditionals if and if else in Python | Calculator |
| 7 | Conditionals | Students use the concept of conditionals to develop a mini capstone project of "Guess the number" game | Guess the number Game |
| 8 | Loops – for loop | Students learn loops as a concept | Guess the number Game |
| 9 | Loops – while loop | Students learn the concept of while loop | Rock paper scissor |
| 10 | Conditionals and loops | Students learn how to use loops and conditionals together to create projects | Star Pattern |
| 11 | Python Strings | String Programming: writing code for removing, changing and adding characters in string | String Calculator |
| 12 | Python Lists | To check if list is empty, clone list, printing list after removing specific characters | Lists |
| 13 | Built in LIST methods | Generating and printing the list, finding index, finding symmetric difference between two lists | Cumulative Score calculator |
| 14 | Python Functions | Introduction to functions, parameters | Printing numbers in Series |
| 15 | Python Functions | Introduction to functions, parameters | Fibonacci series |
| 16 | CAPSTONE PROJECT | File and operation on files, With the help of commands on file handling, how edit the file., How to easily create file at any location. | File handling |

*Lesson plan indicates the topics and projects and should not be read as topics covered per class.*