# Fay/tutor



### **PYTHON BOOTCAMP FOR BEGGINERS**

DAY 1	INTRODUCTION TO PROGRAMMING	INTRODUCTION TO PROGRAMMING AND ITS IMPORTANCE IN TODAY'S WORLD. BASIC PROGRAMMING CONCEPTS SUCH AS ALGORITHMS, DATA STRUCTURES, AND PROGRAMMING LANGUAGES.
DAY 2	INTRODUCTION TO PYTHON	INTRODUCTION TO PYTHON AND ITS FEATURES. INSTALLING PYTHON AND AN IDE (INTEGRATED DEVELOPMENT ENVIRONMENT) LIKE ANACONDA, SPYDER, OR PYCHARM. BASIC PYTHON SYNTAX, DATA TYPES, AND VARIABLES
DAY 3	CONTROL FLOW AND FUNCTIONS	CONDITIONAL STATEMENTS, LOOPS, AND LOGICAL OPERATORS. WRITING FUNCTIONS AND CALLING THEM WITH ARGUMENTS.
DAY 4	DATA TYPES IN PYTHON	BASIC DATA TYPES IN PYTHON: STRINGS, NUMBERS, AND BOOLEANS. TYPECASTING IN PYTHON.



LISTS IN PYTHON

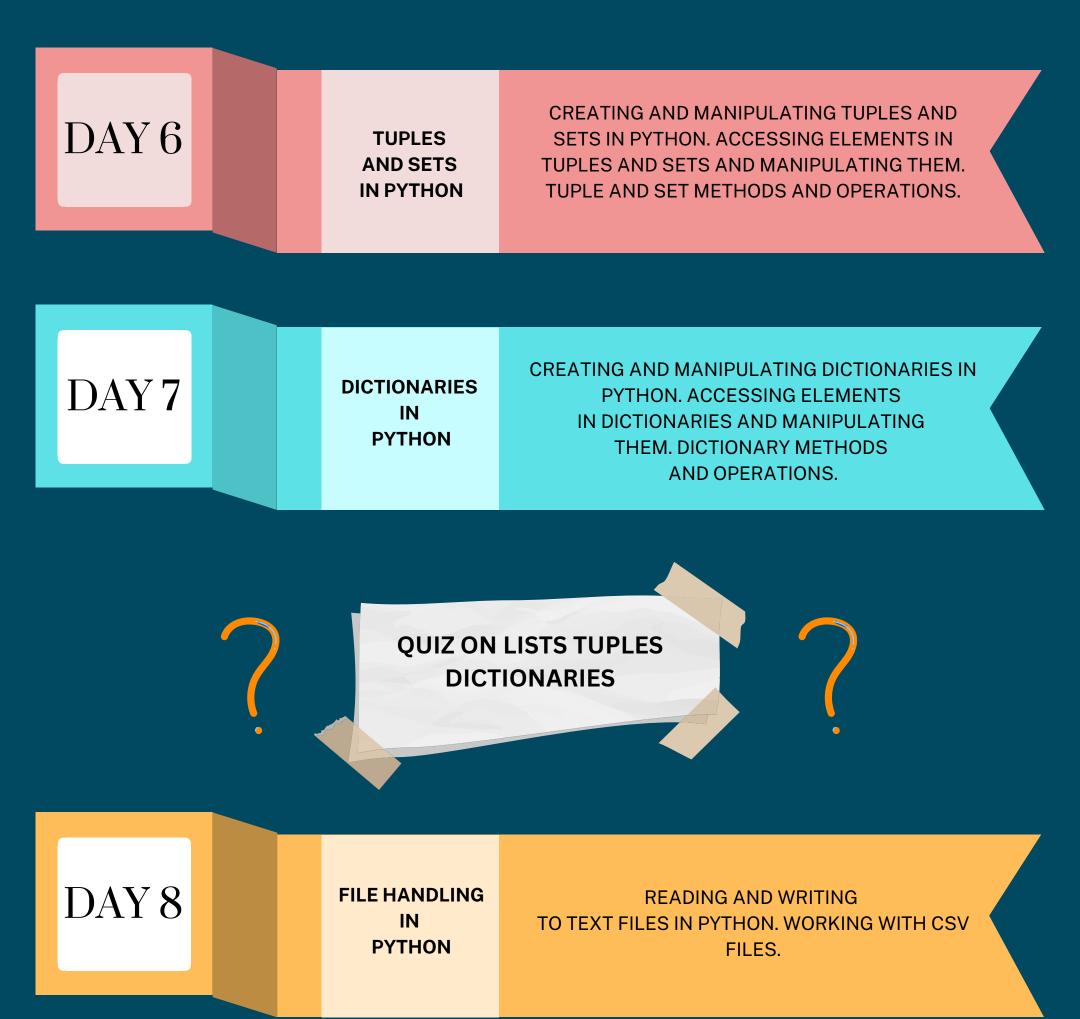
DAY 5

CREATING AND MANIPULATING LISTS IN PYTHON. ACCESSING ELEMENTS IN LISTS AND MANIPULATING THEM. LIST METHODS AND OPERATIONS.

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OBJECT-ORIENTED PROGRAMMING IN PYTHON INTRODUCTION TO OBJECT-ORIENTED PROGRAMMING (OOP) IN PYTHON. CREATING CLASSES AND OBJECTS IN PYTHON. ENCAPSULATION, INHERITANCE, AND POLYMORPHISM IN PYTHON.

#### DAY 10

DAY 9

EXCEPTION HANDLING IN PYTHON UNDERSTANDING EXCEPTIONS IN PYTHON. USING TRY-EXCEPT BLOCKS TO HANDLE EXCEPTIONS. RAISING AND CATCHING EXCEPTIONS IN PYTHON.

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DAY II

#### **PYTHON BOOTCAMP FOR BEGGINERS**

FUNCTIONAL PROGRAMMING IN PYTHON INTRODUCTION TO FUNCTIONAL PROGRAMMING IN PYTHON. USING LAMBDA FUNCTIONS, MAP(), FILTER(), AND REDUCE() FUNCTIONS. FUNCTIONAL PROGRAMMING CONCEPTS SUCH AS HIGHER-ORDER FUNCTIONS AND RECURSION.

QUIZ ON OOPS AND FUNCTIONAL PROGRAMMING

DAY 12

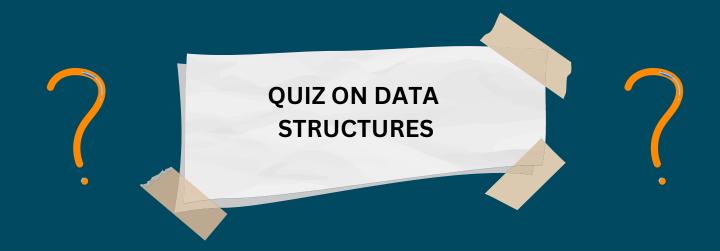
DEBUGGING AND TESTING IN PYTHON DEBUGGING TECHNIQUES IN PYTHON: PRINT STATEMENTS, DEBUGGING TOOLS, AND LOGGING. UNIT TESTING IN PYTHON: USING THE UNITTEST MODULE AND TEST-DRIVEN DEVELOPMENT.

DAY 13

ADVANCED DATA STRUCTURES IN PYTHON - 1 INTRODUCTION TO ADVANCED DATA STRUCTURES IN PYTHON, SUCH AS STACKS, QUEUES, AND LINKED LISTS. UNDERSTANDING THEIR IMPLEMENTATION AND OPERATIONS.

#### DAY l4

ADVANCED DATA STRUCTURES IN PYTHON - 2 INTRODUCTION TO ADVANCED DATA STRUCTURES IN PYTHON, SUCH AS STACKS, QUEUES, AND LINKED LISTS. UNDERSTANDING THEIR IMPLEMENTATION AND OPERATIONS.



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### **PYTHON BOOTCAMP FOR BEGGINERS**

DAY 15	INTRODUCTION TO NUMPY	CREATING NUMPY ARRAYS. INDEXING AND SLICING ARRAYS. BASIC ARRAY OPERATIONS AND MATHEMATICAL FUNCTIONS.
DAY 16	NUMPY- ADVANCED	ARRAY MANIPULATION, SUCH AS RESHAPING, STACKING, AND SPLITTING. BROADCASTING AND VECTORIZATION. UNIVERSAL FUNCTIONS.
DAY 17	INTRODUCTION TO PANDAS	N INTRODUCTION TO PANDAS DATA STRUCTURES: SERIES AND DATAFRAME. CREATING SERIES AND DATAFRAMES. INDEXING AND SELECTING DATA FROM SERIES AND DATAFRAMES.
DAY 18	PANDAS- ADVANCED	DATA MANIPULATION WITH PANDAS: MERGING, JOINING, AND CONCATENATING DATAFRAMES. GROUPING AND AGGREGATING DATA WITH PANDAS.







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