



Blend Vidya
EdTech

PYTHON PROGRAMMING

LIVE MENTORSHIP PROGRAM



Visit Our Website:
www.blendvidya.com

PYTHON



About Company

Blend Vidya is the leading edtech platform. we're dedicated to transforming the way people learn, teach, and engage with educational content. Our mission is to empower educators and learners of all ages to achieve their full potential through cutting-edge technology and dynamic solutions. Founded in 2023, Blend Vidya emerged from a passion for leveraging technology to enhance education. We recognized the need for a more interactive, personalized, and accessible approach to learning. They set out to create a platform that bridges the gap between traditional educational methods and the digital age.



Vision & Mission



Company Vision

Our vision Blend Vidya is to revolutionize the global education landscape by harnessing the potential of technology to create a dynamic, inclusive, and personalized learning experience for every individual. We envision a world where education transcends physical barriers, empowers learners of all backgrounds, and fosters a lifelong love for learning. Through our innovative solutions, we aspire to cultivate a future where knowledge knows no bounds and opportunities for growth are limitless.

Company Mission

Our mission is to empower learners and educators through innovative technology, fostering personalized, inclusive, and effective education for all. Our mission is to empower educators, learners, and institutions with cutting-edge educational technology that enhances engagement, personalization, and outcomes.



What Is Python Programming?

Python programming refers to the practice of writing and executing programs using the Python programming language. Python is a high-level, interpreted, and versatile programming language known for its simplicity, readability, and extensive libraries. It was created by Guido van Rossum and first released in 1991.

Python programming offers a wide range of applications, including web development, data analysis, scientific computing, artificial intelligence, machine learning, automation, scripting, and more. Python comes with a comprehensive standard library that includes modules and packages for various tasks, reducing the need for developers to write code from scratch for common functionalities. Python's versatility and user-friendly syntax have made it a popular choice for both beginners and experienced programmers alike. It's commonly recommended as a first



Why Is It Important To learn A Python Programming?

- Python's simple and clean syntax makes it an excellent choice for beginners. Its readability resembles plain English, which makes it easier to understand and write code, even for individuals with no prior programming experience.
- Python's versatility is one of its greatest strengths. It's used in a wide range of domains, including web development, data analysis, scientific research, artificial intelligence, machine learning, automation, scripting, and more. Learning Python gives you access to numerous career paths and opportunities.
- Python has a vibrant and large community of developers who contribute to its growth. This has led to a vast ecosystem of libraries, frameworks, and tools that can significantly simplify complex tasks. Whether you're working on web development (Django, Flask), data analysis (Pandas, NumPy), machine learning (TensorFlow, PyTorch), or other areas, there's likely a well-maintained Python library available.
- Many industries require Python skills due to its broad application spectrum. Python's ease of use makes it ideal for automating tasks and creating scripts to simplify repetitive processes.
- Learning Python often involves gaining a solid foundation in programming concepts, algorithms, and problem-solving techniques.



```
def check_catch(self):  
    """ Check if catch balls. """  
    for ball in self.overlapping_sprites:  
        self.score.value += 10  
        ball.handle_caught()  
    """ Change game level. """  
    if self.score.value == 200:  
        self.level.value += 1  
        self.level.left = games.screen.width  
        """ Next level game. """  
        message = game.
```


What you will learn?

Module 1: Introduction

- Python Features
- Flavours of Python
- Python v3.x and IDE installation
- PyCharm
- Jupiter Note Book

What you will learn?

Module 2: Operators

- Arithmetic Operators
- Assignment Operators
- Comparison Operators
- Logical Operators
- Bitwise Operators
- Identity Operators
- Membership Operators



What you will learn?

Module 3: Control Statement

- If conditions
- If..else
- If_elif_else
- Nested Condition



What you will learn?

Module 4: Loops

- for..loop
- while loop
- Nested Loop
- Loops with else condition
- pass, break and continue

• input()

• range()



What you will learn?

Module 5: Data Structure


-- Immutable/Mutable

- Number
- Strings
- Tuple
- List
- Dictionary
- Set

-String handling

-List vs Tuple

-Deep Copy vs Shallow Copy



```
<div class="col-md-6 col-lg-8"> <!--  
  <div id="nav" role="navigation">  
    <ul>  
      <li><a href="index.html">Home</a>  
      <li><a href="home-events.html">Home Events</a>  
      <li><a href="multi-col-menu.html">Multi-Column Menu</a>  
      <li class="has-children"> <a href="#">Has Children</a>  
        <ul>  
          <li><a href="tall-button.html">Tall Button</a>  
          <li><a href="image-logo.html">Image Logo</a>  
          <li class="active"><a href="#">Active</a>  
        </ul>  
      </li>  
      <li class="has-children"> <a href="#">Has Children</a>  
        <ul>  
          <li><a href="#">Has Children</a>  
          <li><a href="#">Has Children</a>  
          <li><a href="#">Has Children</a>  
        </ul>  
      </li>  
    </ul>  
  </div>  
</div>
```


What you will learn?

Module 6: Functions

- Create a definitions
- Handling the arguments
- return statement
- Various form of function arguments
- doc string
- Local and Global variable



What you will learn?

Module 7: Functional Programming

- Lambda
- map
- Filter
- Decorators
- Generators
- Iterators
- yield statement



What you will learn?

Module 8: File Operations

- 'with' statement
- modes
- seek
- tell
- read(r)
- write(w)
- append(q)
- read



What you will learn?

Module 9: Exceptional Handler

- Common Exception Errors
- Exception Heirarchy
- try
- except
- else
- finally
- Multiple exeception handling
- Raise exception



What you will learn?

Module 10: Regular Expression

- Meta-characters
- search
- match
- findall
- split
- sub



What you will learn?

Module 11: Object Oriented Programming

- Class
- Objects
- Constructor, destructor
- Operator overloading
- Methods and diff types of methods
- Bound and unbound method

What you will learn?

Module 12: More on OOPs

- Abstraction
- Inheritance
- Polymorphism
- Encapsulation
- Access Control- Public, Protected and Private
- Decorator method



What you will learn?

Module 13: Data Science Libraries

- Numpy
- 1. Pandas
- 2. Matplotlib
- 3. Data Visualisation,
- 4. Line/Bar/Histogram/Pie Charts



What you will learn?

Module 14: SQL Basics

- Database and types of Databases
- Creation of Database and table
- Data types in SQL and Constraints in SQL
- DDL Commands in SQL- CREATE DATABASE/TABLE, ALTER, DROP
- DML Commands in SQL- INSERT, SELECT, UPDATE, DELETE



Thank You

