Matrix
Computers

Director
Mr. Kamal Bhatia

Matrix Computers was founded by Mr. Kamal Bhatia Sir, in **2002** in Jaipur.

Matrix Computers is the India's best software training institute popular for C, C++, Java, php, python and DSA training.

QUALITY EDUCATION NEAR YOU
ONLINE AND OFFLINE CLASSES

📞 **94149-30104, 94147-52750**

Install Python software

Learn basic syntax

Explore data types

Understand control structures

Work with functions

python™

5 Years of Membership

Free Trail for 2 Days ❖
Certified Courses ❖
Govt. Affiliated Courses ❖
Placement Assistance ❖
Repeat Option Available ❖
Group Discount Available ❖
Recorded lectures on Mobile App Available ❖
Notes/Books/MCQ/Test Papers Available ❖

"Python is a programming language that is interpreted, object-oriented, and considered to be high-level too. It is one of the easiest yet most useful programming languages which is widely used in the software industry for Competitive Programming, Web Development, and creating software."

CORE PYTHON

Duration : 3 Months
Fees   :   Rs. 8000 Only/-

1. Introduction to Python

- ➢ What is Python
- ➢ The application areas of Python
- ➢ Download and install Python
- ➢ Execute Python program from command prompt and using IDLE
- ➢ Save programs with .py extension and execute it from prompt

2. Python Basics

- ➢ Data types and variables
- ➢ Operators and operator precedence
- ➢ Data type conversions
- ➢ Command line argument
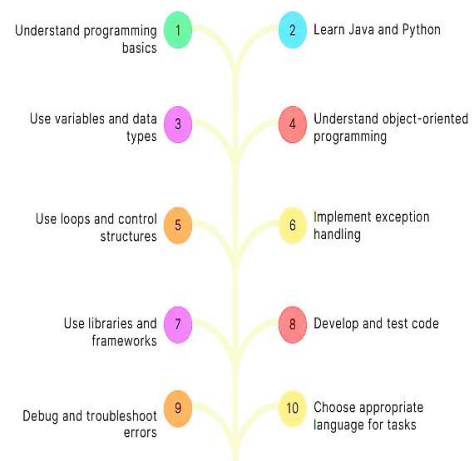- ➢ Data input
- ➢ Comments
- ➢ Import modules

3. Python Flow Control

- ➢ If statement
- ➢ If.. elif.. else statement
- ➢ While loop
- ➢ For loop
- ➢ Break & continue
- ➢ Else clause

4. Python Sequences

- ➢ Range
- ➢ String
- ➢ List
- ➢ Tuple
- ➢ Dictionary

➤ Set

5. Introduction to Python IDE

➤ PyCharm
➤ Shallow and deep copy

6. File Handling

➤ Reading
➤ Writing
➤ File manipulations
➤ Directories

7. Functions and modules

➤ What is function
➤ Define a function
➤ Pass arguments
➤ Arguments with default values
➤ Arbitrary arguments
➤ Local and global variables
➤ Return a value from function
➤ Return multiple values
➤ Documentation Strings
➤ Python built in functions
➤ Mathematical functions
➤ Random number functions

9. Exception Handling

➤ What is exception?
➤ Python built-in exceptions
➤ Try
➤ Except
➤ Finally
➤ Raise exceptions
➤ User defined exception
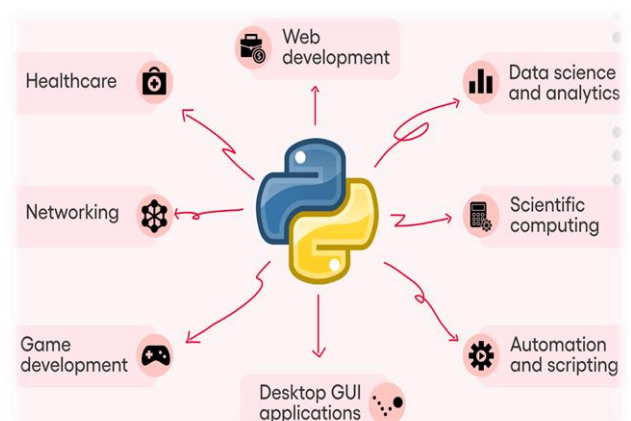➤ Assertions

10. Python Graphics

➤ Turtle

➤ Mathematical constants

8. Python Modules

➤ What is module?
➤ Import module using import statement
➤ Use from... import statement
➤ Use from ... import* statement
➤ Location modules
➤ PYTHONPATH variable
➤ Namespaces and scoping
➤ Dir(), globals(), locals() and reload()

ADVANCE PYTHON

11. Python classes and objects

- ➢ Class definition
- ➢ Creating objects
- ➢ Constructors
- ➢ Accessing attributes
- ➢ Built-in class attributes
- ➢ Destructors
- ➢ Inheritance
- ➢ Overriding & Overloading
- ➢ Data hiding

12. Regular Expressions

- ➢ Match()
- ➢ Search()
- ➢ Search and replace
- ➢ Modifiers
- ➢ Patterns
- ➢ Character classes
- ➢ Repetitions

13. Database programming

- ➢ With SQLite
- ➢ Installing SQLite browser
- ➢ Creating database
- ➢ CRUD operations With MySQL
- ➢ MySql datatypes
- ➢ CRUD operations

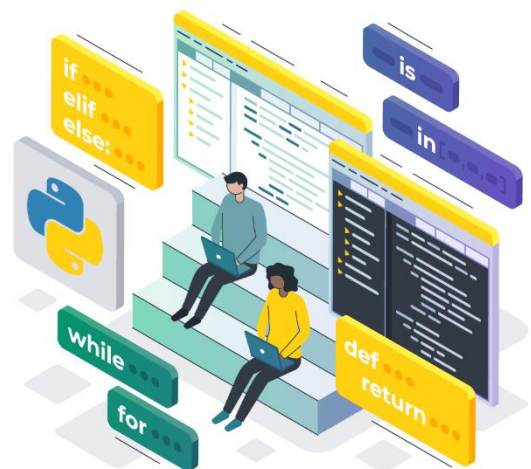## 14. Python GUI Programming with Tkinter

- ➢ Widgets
- ➢ Geometry managers / layout managers
- ➢ Variable classes
- ➢ Events and binds

15. Packages

- ➢ Creating packages
- ➢ Installing packages using PIP

16. Functional Programming

- ➢ Iterators
- ➢ Generators
- ➢ The lambda construct
- ➢ Comprehensions
- ➢ Map, reduce and filter

DATA SCIENCE

17. Sockets Programming

- The Socket
- Module Server
- Socket Methods
- Client Socket Methods
- General Socket Methods

18. Numpy Module

- N-dimensional data structure
- Creating arrays
- Indexing arrays by slicing
- Basic operations and manipulations

19. Pandas Module

- Pandas Basic
- Pandas Series
- Pandas DataFrame

20. Matploatlib Module

- Types of Graph
- Data Visualization
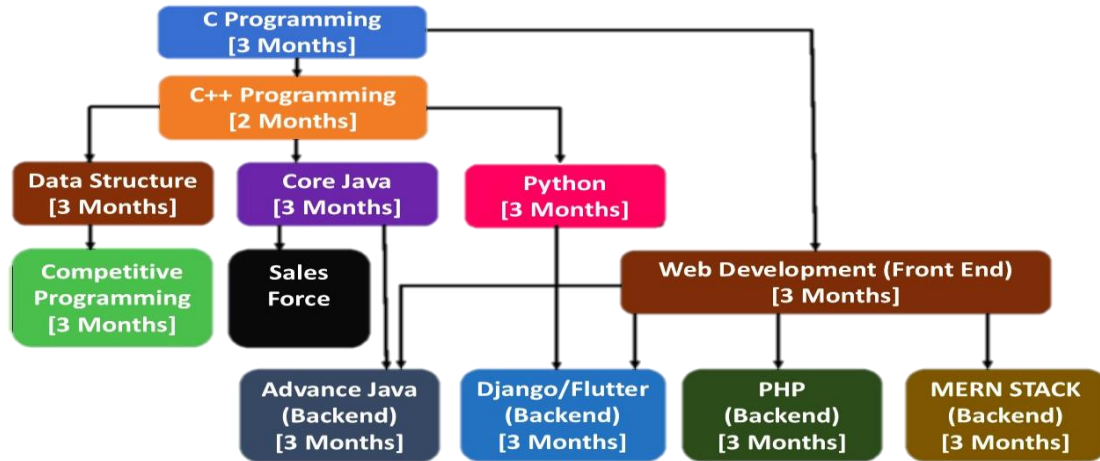- Handling Array
- Handling DataFrame

21. MetaProgramming in Python

- Function Decorator
- Class Decorator
- Type Class
- Inner Classes

PROJECTS (Any 2 – 3 projects from the list)

- Calculator & Notepad
- Analog Clock
- Tic Tac Toe
- Library Management
- Bank Management System
- Restaurant Management System
- Class Attendance Management System

Other Certified Courses Available

```
                    ┌─────────────────────┐
                    │   C Programming     │
                    │    [3 Months]       │
                    └─────────────────────┘
                    ┌─────────────────────┐
                    │  C++ Programming    │
                    │    [2 Months]       │
                    └─────────────────────┘
   ┌──────────────┐  ┌──────────────┐  ┌──────────────┐
   │Data Structure│  │  Core Java   │  │   Python     │
   │  [3 Months]  │  │  [3 Months]  │  │  [3 Months]  │
   └──────────────┘  └──────────────┘  └──────────────┘
   ┌──────────────┐  ┌──────────────┐  ┌────────────────────────────┐
   │ Competitive  │  │    Sales     │  │ Web Development (Front End) │
   │ Programming  │  │    Force     │  │        [3 Months]           │
   │  [3 Months]  │  │              │  └────────────────────────────┘
   └──────────────┘  └──────────────┘
```

| Advance Java (Backend) [3 Months] | Django/Flutter (Backend) [3 Months] | PHP (Backend) [3 Months] | MERN STACK (Backend) [3 Months] |

- ❖ **Office Automation**
- ❖ **RS-CIT**
- ❖ **Advance Excel**
- ❖ **Tally ERP with GST**

- ❖ **RS-CFA**
- ❖ **Web Designing**
- ❖ **Desktop Publishing**
- ❖ **Core PHP**

Coaching available for: –

BTech, MTech, BCA, MCA, IX, X, XI, XII students and all working professionals.

Why Choose Matrix

Online Live classes
We provide online live classes so that you can learn from the comfort and safety of your home.

Material Support
Free study material which has all key points to remember. It also covers whole topic along with important question-answers and problem solving techniques.

Regular and Weekend Classes
Weekend classes for working professionals and students who come late from college and do not have time on weekdays. They can learn at their own comfortable pace.

Completion Certificate
A course completion certificate is provided to students that states his technical abilities.

Our trainees are working in the leading IT companies all over the world (Amazon, Google, Facebook etc.). The achievement of Matrix Computers is amalgamated by the fact that we have trainees coming from various parts of world including USA, CANADA, Dubai etc. Our team has experts in most of the IT technologies like Java, Advance Java, php, Python, etc.

Meet Our Trainers

Sunny Jain	Sheespal Choudhary	Kamal Bhatia	Divya Bhatia
15+ years experience	5+ years experience	25+ years experience	20+ years experience