**Updated Python, AWS and Microservices Total 91 Hours**

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| **Python Syllabus - 25** |
| **Topics** |
| 1. **Installing Python, Anaconda** |
| 1. **Fundamentals of Python**   • Introduction to Python  • Running Python Programs  • Writing Python Code |
| 1. **Working with Data**   • Data Types and Variables  • Using Numeric Variables  • Using String Variables |
| 1. **Input and Output**   • Printing with Parameters  • Getting Input from a User  • String Formatting |
| 1. **Making Decisions**   • Logical Expressions  • The “if” Statement  • Logical Operators  • More Complex Expressions |
| 1. **Finding and Fixing Problems**   • Types of Errors  • Troubleshooting Tools  • Using the Python Debugger |
| 1. **Lists and Loops**   • Lists and Tuples  • List Functions  • “For” Loops  • “While” Loops |
| 1. **Numeric and Date**   • Dates and Times  • Advanced Data and Time Management  • Random Numbers  • The Math Library |
| 1. **Working with Strings**   • Character Data  • String Functions  • Input Validation with “try / except” |
| 1. **Functions**   • Writing and Calling Functions  • Function Inputs and Outputs  • Local and Global Scope |
| 1. **Python Classes**   • Class Variables and Methods  • Managing Class Files |

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| **Tableau Visualization Tool - 10 Hrs** |
| * Building Dashboards for the Data set |
| **SQL Syllabus - 10 Hrs** |
| * Introduction To SQL |
| * Data Retrieval Techniques |
| * Working with DDL Commands |
| * Working with DML Commands |
| * Integrity Constraints |
| * Built In Functions |
| * Data Aggregation |
| * Importance Of Join |
| * Set Operators & Pseudo Columns |
| * Sub Queries |
| **PL/SQL – 4 Hrs** |
| * Introduction To PL/SQL |
| * Creating & Using Cursors |
| * Understanding Exception Handling |
| * Creation Of Stored Procedures |
| * Creating & Using Functions |
| * Creating & Using Packages |
| * Triggers In PL/SQL |
| **Flask/Django/AWS Basics 4 Hours** |
| Any Pending topics from all the course and Doubts. |
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| **AWS Topics – 15 Hrs** |
| AWS LAMBDA  AWS EC2  AWs S3  AWS DYNAMODB  AWS REDSHIFT  AWS APIGATEWAY  AWS SNS  AWS SQS |
| **Microservices & Rest API FUNDAMENTALS – 10 Hrs** |
| Web API |
| REST API |
| Create web apis |
| Consume web apis |
| Microservices architecture |
| Microservices with python. |
| **Doubt Clearing /Backlogs 2 Hrs** |
| PYSPARK PROGRAMMING (5 Hrs) |
| Distributed Computing Framework  Why PySpark?  PySpark Architecture  Spark SQL  Pandas API on Spark  Spark Transformations  Spark Streaming  RDD Operations |

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| **Hadoop (5 hrs)** |
| Hadoop Architecture |
| Hadoop Environment setup |
| Basic Hadoop commands |
| Hive |
| Pig |
| **Concepts of SNOWFLAKE (4 hrs)** |
| Data Movement |
| Performance Optimization |
| Storage & Data Protection |
| Security |
| Data Transformation |