

MASTERS IN DATA ANALYTICS

LEARNING PHASE

Learn updated tools and modules from basic to advance by industry expert

ASSESSMENT

Evaluate your skillset with real-time case studies and assignments

LIVE PROJECTS

Work on domain specific industrial projects and make your experience relevant

IBM CERTIFICATION

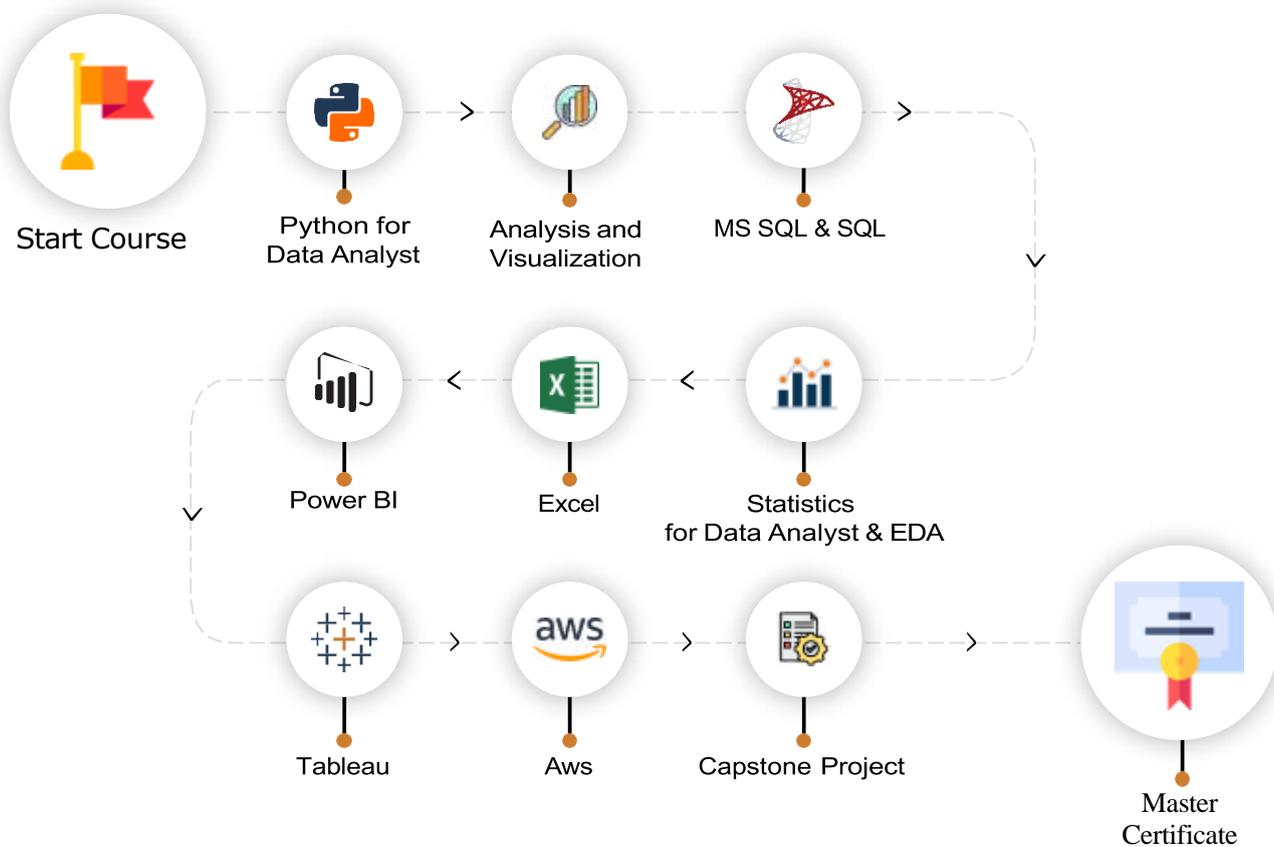
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PROFILE GROOMING

Get Interview Ready with experts. Attain Resume Build-Up, 1:1 Mock Interview

UNLIMITED INTERVIEW CALLS

Get Guaranteed Job Interview calls from FinTech Startups and top MNCs



Modules of **Data Analyst**

- ✔ Python for Data Analyst
- ✔ Data Analysis and Visualization ✔
- Statistics for Data Analyst
- ✔ MS SQL Server and SQL ✔
- Analytics with Excel
- ✔ Analytics Microsoft Power BI ✔
- Analytics with Tableau
- ✔ Cloud: AWS
- ✔ Analyst - Live Project

Introduction to Data Analytics

✔ Data Analytics Is The Process Of Analyzing Raw Data To Find Trends And Answer Questions. It Has A Broad Scope Across The Field. This Process Includes Many Different Techniques And Goals That Can Shift From Industry To Industry.

- What is Data Analytic?
- Common Terms in Data Analytics What is data?
- Classification of data
- Relevance in industry and need of the hour
- Types of problems and business objectives in various industries How leading companies are harnessing the power of analytics? Critical success drivers.
- Overview of Data Analytics tools & their popularity.
- Data Analytics Methodology & problem-solving framework. List of steps in Data Analytics projects

Python for Data Analyst

✔ Data Ananyst Is A Powerful Analytics Platform To Make Discoveries. By Using Different Aspects Of Computer Science, Data Visualisations, Data Analytics, Statistics, R And Python Programming In Data Science, You May Convert Voluminous Data Into Meaningful Contents.

- Introduction To Python
 - Installation and Working with Python
 - Understanding Python variables Python basic
 - Operators Understanding the Python blocks.
- Python Keyword and Identifiers
 - Python Comments, Multiline Comments. Python
 - Indentation
 - Understating the concepts of Operators Introduction To
- Variables
 - Variables, expression condition and function Global
 - and Local Variables in Python Packing and
 - Unpacking Arguments
 - Type Casting in Python
 - Byte objects vs. string in Python Variable
 - Scope
- Python Data Type
 - Declaring and using Numeric data types Using string
 - data type and string operations Understanding Non-
 - numeric data types

- Understanding the concept of Casting and Boolean.

- Strings List
- Tuples
- Dictionary
- Sets
- Control Structure & Flow
 - Statements – if, else, elif
 - How to use nested IF and Else in Python Loops
 - Loops and Control Statements.
 - Jumping Statements – Break, Continue, pass Looping techniques in Python
 - How to use Range function in Loop? Programs for printing Patterns in Python How to use if and else with Loop
 - Use of Switch Function in Loop
 - Elegant way of Python Iteration
 - Generator in Python
 - How to use nested Loop in Python Use If and Else in for and While Loop
 - Examples of Looping with Break and Continue Statement How to use IN or NOT IN keyword in Python Loop.
- Python Function, Modules and Packages Python
 - Syntax
 - Function Call Return
 - Statement
 - Arguments in a function – Required, Default, Positional, Variable-length Write an Empty
 - Function in Python –pass statement.
 - Lamda/ Anonymous Function
 - *args and **kwargs Help
 - function in Python
 - Scope and Life Time of Variable in Python Function Nested Loop in Python Function
 - Recursive Function and Its Advantage and Disadvantage Organizing python codes using functions
 - Organizing python projects into modules Importing own module as well as external modules Understanding Packages
 - Random functions in python
 - Programming using functions, modules & external packages Map, Filter and Reduce function with Lambda Function More example of Python Function
- List
 - What is List.
 - List Creation
 - List Length
 - List Append

- List Insert List
- Remove
- List Append & Extend using “+” and Keyword List
- Delete
- List related Keyword in Python List
- Revers
- List Sorting
- List having Multiple Reference String
- Split to create a List
- List Indexing
- List Slicing
- List count and Looping
- List Comprehension and Nested Comprehension Tuple
- • What is Tuple Tuple
- • Creation
- • Accessing Elements in Tuple Changing a
- • Tuple
- • Tuple Deletion
- • Tuple Count Tuple
- • Index
- • Tuple Membership
- • TupleBuilt in Function (Length, Sort) Dictionary
- • Dict Creation
- • Dict Access (Accessing Dict Values) Dict Get
- • Method
- • Dict Add or Modify Elements Dict
- • Copy
- • Dict From Keys.
- • Dict Items
- • Dict Keys (Updating, Removing and Iterating) Dict Values
- • Dict Comprehension Default
- • Dictionaries Ordered
- • Dictionaries Looping
- • Dictionaries
- • Dict useful methods (Pop, Pop Item, Str , Update etc.) Sets
- • What is Set Set
- • Creation
- • Add element to a Set Remove
- • elements from a Set PythonSet
- • Operations Frozen Sets
- Strings
 - What is Set

- Set Creation
- Add element to a Set Remove elements from a Set PythonSet
- Operations
- Python Exception Handling
 - Python Errors and Built-in-Exceptions Exception
 - handling Try, Except and Finally Catching Exceptions in Python
 - Catching Specific Exception in Python Raising Exception
 - Try and Finally Python
- File Handling Opening a File
 - Python File Modes
 - Closing File Writing to a File Reading from a File
 - Renaming and Deleting Files in Python Python
 - Directory and File Management List Directories and Files
 - Making New Directory
 - Changing Directory
- Python Database Interaction
 - SQL Database connection using Creating and searching tables
 - Reading and Storing config information on database Programming using database connections
- Reading an excel Working With Excel
 - Reading an excel file using Python Writing to an excel sheet using Python Python| Reading an excel file
 - Python | Writing an excel file
 - Adjusting Rows and Column using Python
 - ArithmeticOperation in Excel file.
 - Play with Workbook, Sheets and Cells in Excel using Python Creating and Removing Sheets
 - Formatting the Excel File Data More example of Python Function
- Complete Understanding of OS Module of Python Check Dirs.
 - (exist or not)
 - How to split path and extension? How to get user profile detail?
 - Get the path of Desktop, Documents, Downloads etc. Handle the File System Organization using OS

Data Analysis and Visualization

✔ Data Visualization Is The Graphical Way To Representation Of Information And Data. By Using Visual Elements Like Graphs, Maps And Charts. Data Visualization Tools Provide An Accessible Easy Way To See And Understand The Data.

- Data Analysis and Visualization using Pandas.
 - Statistics
 - Pandas
- Data Analysis and Visualization using NumPy and Matplotlib NumPy
 - Matplotlib
- Introduction to Data Visualization with Seaborn Introduction
 - to Seaborn
 - Visualizing Two Quantitative Variables
 - Visualizing a Categorical and a Quantitative Variable Customizing Seaborn
 - Plots

Statistics for Data Analyst

✔ This Module Offers Knowledge To Introduce You To The Basic Principles Based On Statistical Methods And Procedures Followed In Data Analysis. This Course Will Help You To Understand The Work Process Involved With Summarizing The Data, Data Storage, Visualizing The Data Results, And A Hands-On Approach With Statistical Analysis With Python.

- Introduction to Statistics
 - Descriptive Statistics
 - Sample vs Population Statistics Random
 - variables
 - Probability distribution functions
 - Expected value
 - Normal distribution
 - Gaussian distribution Z-
 - score
 - Spread and Dispersion Correlation and
 - Co-variance
- Data Pre-Processing & Data Mining Data
 - Preparation
 - Feature Engineering Feature
 - Scaling Datasets
 - Dimensionality Reduction Anomaly
 - Detection

- Parameter Estimation Data
- and Knowledge
- Selected Applications in Data Mining EDA
- (Exploratory Data Analysis)
 - Need for structured exploratory data
 - EDA framework for exploring the data and identifying any problems with the data (Data Audit Report)
 - Identify missing data Identify
 - outliers' data
 - Imbalanced Data Techniques

Databases – MS SQL and SQL Queries

✔ Microsoft SQL Server Is A Relational Database Management System (RDBMS) That Supports A Wide Variety Of Transaction Processing, Business Intelligence And Analytics Applications In Corporate IT Environments. In Order To Experiment With Data Through The Creation Of Test Environments, Data Scientists Make Use Of SQL As Their Standard Tool, And To Carry Out Data Analytics With The Data That Is Stored In Relational Databases Like Oracle, Microsoft SQL, MySQL, We Need SQL.

- SQL Server Fundamentals
 - SQL Server 2019 Installation
 - Service Accounts & Use, Authentication Modes & Usage, Instance Configurations SQL Server
 - Features & Purpose
 - Using Management Studio (SSMS)
 - Configuration Tools & SQLCMD
 - Conventions & Collation
- SQL Server 2019 Database Design SQL
 - Database Architecture Database Creation
 - using GUI
 - Database Creation using T-SQL scripts DB
 - Design using Files and File Groups File locations
 - and Size parameters Database Structure
 - modifications
- SQL Tables in MS SQL Server SQL
 - Server Database Tables
 - Table creation using T-SQL Scripts
 - Naming Conventions for Columns Single
 - Row and Multi-Row Inserts Table Aliases
 - Column Aliases & Usage Table
 - creation using Schemas Basic
 - INSERT
 - UPDATE

- DELETE
- SELECT queries and Schemas Use of
- WHERE, IN and BETWEEN Variants of
- SELECT statement ORDER BY
- GROUPING HAVING
- ROWCOUNT and CUBE Functions Data
- Validation and Constraints
 - Table creation using Constraints NULL
 - and IDENTITY properties
 - UNIQUE KEY Constraint and NOT NULL
 - PRIMARY KEY Constraint & Usage CHECK
 - and DEFAULT Constraints Naming Composite
 - Primary Keys Disabling Constraints & Other
 - Options
- Views and Row Data Security Benefits of
 - Views in SQL Database Views on Tables
 - and Views
 - SCHEMA BINDING and ENCRYPTION
 - Issues with Views and ALTER TABLE Common
 - System Views and Metadata Common Dynamic
 - Management views Working with JOINS inside
 - views
- Indexes and Query tuning Need for
 - Indexes & Usage?
 - Indexing Table & View Columns Index
 - SCAN and SEEK INCLUDED Indexes
 - & Usage
 - Materializing Views (storage level) Composite
 - Indexed Columns & Keys Indexes and Table
 - Constraints Primary Keys & Non-Clustered
 - Indexes
- Stored Procedures and Benefits Why to use
 - Stored Procedures? Types of Stored
 - Procedures
 - Use of Variables and parameters
 - SCHEMABINDING and ENCRYPTION
 - INPUT and OUTPUT parameters System
 - level Stored Procedures Dynamic SQL and
 - parameterization
- System functions and Usage Scalar
 - Valued Functions
 - Types of Table Valued Functions
 - SCHEMABINDING and ENCRYPTION
 - System Functions and usage Date
 - Functions

- Time Functions
- String and Operational Functions ROW_COUNT
- GROUPING Functions
- Triggers, cursors, memory limitations Why to use
 - Triggers?
 - DML Triggers and Performance impact
 - INSERTED and DELETED memory tables Data
 - Audit operations & Sampling Database Triggers
 - and Server Triggers Bulk Operations with Triggers
- Cursors and Memory Limitations Cursor
 - declaration and Life cycle STATIC
 - DYNAMIC
 - SCROLL Cursors
 - FORWARD_ONLY and LOCAL Cursors
 - KEYSET Cursors with Complex SPs
- Transactions Management ACID
 - Properties and Scope EXPLICIT
 - Transaction types
 - IMPLICIT Transactions and options AUTOCOMMIT
 - Transaction and usage

Analytics with Excel

✔ Excel Is One Of The Most Popular Data Analysis Tool, To Help Visualize And Gain Insights From Your Data. Analytics With Excel Helps You To Boost Your Microsoft Excel Skills.

- Understanding Concepts of Excel Creation
 - of Excel Sheet Data Range Name,
 - Format Painter
 - Conditional Formatting, Wrap Text, Merge & Centre Sort, Filter,
 - Advance Filter
 - Different type of Chart Creations
 - Auditing, (Trace Precedents, Trace Dependents) Print Area Data Validations,
 - Consolidate, Subtotal
 - What if Analysis (Data Table, Goal Seek, Scenario) Solver, Freeze
 - Panes
 - Various Simple Functions in Excel(Sum, Average, Max, Min) Real Life
 - Assignment work
- Ms Excel Advance Advance
 - Data Sorting Multi-level
 - sorting
 - Restoring data to original order after performing sorting Sort by icons
 - Sort by colours

- Lookup Functions
- Subtotal, Multi-Level Subtotal
- Grouping Features
- Consolidation With Several Worksheets Filter
- Printing of Row & Column Heading on Each Page Workbook
- Protection and Worksheet Protection Specified Range
- Protection in Worksheet
- Excel Data Analysis Data
- Table
- Pivot Table
- Generating MIS Report In Excel Text
- Functions
- Lookup & Reference Function
- Logical Functions & Date and Time Functions Database
- Functions
- Statistical Functions
- Financial Functions
- Functions for Calculation Depreciation MIS
- Reporting & Dash Board
 - Dashboard Background
 - Dashboard Elements Interactive
 - Dashboards Type of Reporting In
 - India
- What is Macro?
 - Understanding Macros
- Recording a Macro
 - Recording a Macro
- Different Components of a Macro User Form
 - Title
 - Module
- What is VBA and how to write macros in VBA. Writing a
 - simple macro
 - Apply arithmetic operations on two cells using macros. How to align the text using macros.
 - How to change the background color of the cells using macros. How to change the border color and style of the cells using macros. Use cell referencing using macros.
 - How to copy the data from one cell and paste it into another. How to change the font color of the text in a cell using macros

Analytics Microsoft Power BI

- ✓ The Power BI Course Assists The User To Understand The Way To Install Power BI Desktop Also By Understanding And Developing The Workshop And Insights Using The Data. It Offers Tools And Techniques

That Are Used To Visualize And Analyze Data. The Course Will Help You To Learn And Grab Insights On Everything An Organization Need; To Manage The Data With Power BI.

- Introduction to Power BI Overview of
 - BI concepts Why we need BI?
 - Introduction to SSBI SSBI
 - Tools
 - Why Power BI? What is Power BI?
 - Building Blocks of Power BI
 - Getting started with Power BI Desktop Get Power BI Tools
 - Introduction to Tools and Terminology
 - Dashboard in Minutes
 - Interacting with your Dashboards Sharing Dashboards and Reports
- Power BI Desktop Power
 - BI Desktop
 - Extracting data from various sources Workspaces in Power BI
- Power BI Data Transformation Data
 - Transformation Query Editor
 - Connecting Power BI Desktop to our Data Sources Editing Rows
 - Understanding Append Queries Editing Columns
 - Replacing Values Formatting Data
 - Pivoting and Unpivoting Columns Splitting Columns
 - Creating a New Group for our Queries
 - Introducing the Star Schema Duplicating and Referencing Queries Creating the Dimension Tables Entering Data Manually
 - Merging Queries
 - Finishing the Dimension Table Introducing the another DimensionTable Creating an Index Column
 - Duplicating Columns and Extracting Information Creating Conditional Columns
 - Creating the FACT Table
 - Performing Basic Mathematical Operations
 - Improving Performance and Loading Data into the Data Model

- Modelling with Power BI Introduction to
 - Modelling Modelling Data
 - Manage Data Relationship Optimize
 - Data Models Cardinality and Cross
 - Filtering Default Summarization & Sort
 - by Creating Calculated Columns
 - Creating Measures & Quick Measures Data
- Analysis Expressions (DAX)
 - What is DAX? Data
 - Types in DAX
 - Calculation Types
 - Syntax, Functions, Context Options DAX
 - Functions
 - Measures in DAX
 - Measures and Calculated Columns ROW
 - Context and Filter Context in DAX Operators in
 - DAX - Real-time Usage
 - Quick Measures in DAX - Auto validations In-
 - Memory Processing DAX Performance
- Power BI Desktop Visualisations How to
 - use Visual in Power BI? What Are
 - Custom Visuals?
 - Creating Visualisations and Colour Formatting Setting Sort
 - Order
 - Scatter & Bubble Charts & Play Axis
 - Tooltips and Slicers, Timeline Slicers & Sync Slicers Cross Filtering
 - and Highlighting
 - Visual, Page and Report Level Filters Drill
 - Down/Up
 - Hierarchies and Reference/Constant Lines Tables,
 - Matrices & Conditional Formatting KPI's, Cards &
 - Gauges
 - Map Visualizations Custom
 - Visuals Managing and
 - Arranging
 - Drill through and Custom Report Themes
 - Grouping and Binning and Selection Pane, Bookmarks & Buttons Data Binding and
 - Power BI Report Server
- Introduction to Power BI Dashboard and Data Insights Why
 - Dashboard? and Dashboard vs Reports Creating Dashboards
 - Configuring a Dashboard Dashboard Tiles, Pinning Tiles Power BI
 - Q&A
 - Quick Insights in Power BI Direct
- Connectivity

- Custom Data Gateways
- Exploring live connections to data with Power BI Connecting
 - directly to SQL Server
 - Connectivity with CSV & Text Files
 - Excel with Power BI Connect Excel to Power BI, Power BI Publisher for Excel Content packs
 - Update content packs
- Publishing and Sharing
 - Introduction and Sharing Options Overview
 - Publish from Power BI Desktop and Publish to Web Share
 - Dashboard with Power BI Service
 - Workspaces (Power BI Pro) and Content Packs (Power BI Pro) Print or Save as PDF and Row Level Security (Power BI Pro) Export Data from a Visualization
 - Export to PowerPoint and Sharing Options Summary Refreshing Datasets
 - Understanding Data Refresh
 - Personal Gateway (Power BI Pro and 64-bit Windows) Replacing a Dataset and Troubleshooting Refreshing

Analytics with Tableau

✔ Tableau Is An End-To-End Data Analytics Platform That Allows You To Prep, Analyze, Collaborate, And Share Your Data Insights. Tableau Excels In Self-Service Visual Analysis, Allowing People To Ask New Questions Of Governed Big Data And Easily Share Those Insights Across The Organization.

- Introduction to Data Preparation using Tableau Prep Data
 - Visualization
 - Business Intelligence tools
 - Introduction to Tableau Tableau
 - Architecture Tableau Server
 - Architecture VizQL Fundamentals
 - Introduction to Tableau Prep
 - Tableau Prep Builder User Interface
 - Data Preparation techniques using Tableau Prep Builder tool Data
- Connection with Tableau Desktop
 - Features of Tableau Desktop
 - Connect to data from File and Database Types of Connections
 - Joins and Unions
 - Data Blending
 - Tableau Desktop User Interface Basic
- Visual Analytics
 - Visual Analytics

- Basic Charts Bar Chart, Line Chart, and Pie Chart Hierarchies
- Data Granularity
- Highlighting Sorting
- Filtering
- Grouping
- Sets
- Calculations in Tableau Types
 - of Calculations
 - Built-in Functions (Number, String, Date, Logical and Aggregate) Operators and Syntax
 - Conventions
 - Table Calculations
 - Level of Detail (LOD) Calculations Using R
 - within Tableau for Calculations
- Advanced Visual Analytics Parameters
 - Tool tips
 - Trend lines
 - Reference lines
 - Forecasting Clustering
- Level of Detail (LOD) Expressions in Tableau Count
 - Customer by Order
 - Profit per Business Day
 - Comparative Sales Profit Vs
 - Target
 - Finding the second order date Cohort
 - Analysis
- Geographic Visualizations in Tableau Introduction to
 - Geographic Visualizations Manually assigning
 - Geographical Locations Types of Maps
 - Spatial Files Custom
 - Geocoding Polygon
 - Maps Web Map
 - Services
 - Background Images Advanced
- charts in Tableau
 - Box and Whisker's Plot
 - Bullet Chart
 - Bar in Bar Chart Gantt
 - Chart Waterfall Chart
 - Pareto Chart Control
 - Chart Funnel Chart
 -
 -

- Bump Chart
- Step and Jump Lines
- Word Cloud
- Donut Chart Dashboards
- and Stories
 - Introduction to Dashboards The
 - Dashboard Interface Dashboard
 - Objects Building a Dashboard
 - Dashboard Layouts and Formatting
 - Interactive Dashboards with actions
 - Designing Dashboards for devices Story
 - Points
- Get Industry Ready Tableau Tips
 - and Tricks
 - Choosing the right type of Chart Format Style
 - Data Visualization best practices Exploring
- Tableau Online
 - Publishing Workbooks to Tableau Online Interacting
 - with Content on Tableau Online Data Management
 - through Tableau Catalog
 - AI-Powered features in Tableau Online (Ask Data and Explain Data) Understand Scheduling
 - Managing Permissions on Tableau Online Data Security
 - with Filters in Tableau Online

Cloud: AWS(Amazon Web Services)

✓ AWS Allows You To Easily Move Data Between The Data Lake And Purpose-Built Data Services. For Example, AWS Glue Is A Serverless Data Integration Service That Makes It Easy To Prepare Data For Analytics, Machine Learning, And Application Development.

- Introduction to Cloud Computing
 - In this module, you will learn what Cloud Computing is and what are the different models of Cloud Computing along with the key differentiators of different models. We will also introduce you to virtual world of AWS along with AWS key vocabulary, services and concepts.
- Amazon EC2 and Amazon EBS
 - In this module, you will learn about the introduction to compute offering from AWS called EC2. We will cover different instance types and Amazon AMIs. A demo on launching an AWS EC2 instance, connect with an instance and host ing a website on AWS EC2 instance. We will also cover EBS storage Architecture (AWS persistent storage) and the concepts of AMI and snapshots.
- Amazon Storage Services S3 (Simple Storage Services)

- In this module, you will learn how AWS provides various kinds of scalable storage services. In this module, we will cover different storage services like S3, Glacier, Versioning, and learn how to host a static website on AWS.
- Cloud Watch & SNS
 - In this module, you will learn how to monitoring AWS resources and setting up alerts and notifications for AWS resources and AWS usage billing with AWS CloudWatch and SNS.
- Scaling and Load Distribution in AWS
 - In this module, you will learn about 'Scaling' and 'Load distribution techniques' in AWS. This module also includes a demo of Load distribution & Scaling your resources horizontally based on time or activity.
- AWS VPC
 - In this module, you will learn introduction to Amazon Virtual Private Cloud. We will cover how you can make public and private subnet with AWS VPC. A demo on creating VPC. We will also cover overview of AWS Route 53.
- Identity and Access Management Techniques (IAM)
 - In this module, you will learn how to achieve distribution of access control with AWS using IAM.
 - Amazon IAM
 - User
 - Group
 - Role
 - Policy
- Amazon Relational Database Service (RDS)
 - In this module, you will learn how to manage relational database service of AWS called RDS.
- Multiple AWS Services and Managing the Resources' Lifecycle
 - In this module, you will get an overview of multiple AWS services. We will talk about how do you manage life cycle of AWS resources and follow the DevOps model in AWS. We will also talk about notification and email service of AWS along with Content Distribution Service in this module.
- AWS Architecture and Design
 - In this module, you will cover various architecture and design aspects of AWS. We will also cover the cost planning and optimization techniques along with AWS security best practices, High Availability (HA) and Disaster Recovery (DR) in AWS.
- Migrating to Cloud & AWS
- Router S3 DNS
 - Public DNS Private
 - DNS Routing
 - policy Records
 - Register DNS
 - Work with third party DNS as well Cloud
- Formation
 - Stack Templet
 - Json/ Ymal
 -

- Elastic Beanstalk
- EFS / NFS (hands-on practice) Hands-on
- practice on various Topics Linux
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