

MAINFRAMES COURSE CONTENT

❖ **INTRODUCTION ABOUT MAINFRAMES:**

- Comparison of computer Types
- Distinguishing characteristics of a mainframe OS
- Evolution of Mainframe hardware and software
- Mainframe architecture
- Z Architecture
- Introduction to ISPF
- Subsystems & Facilities
- Memory management
- Address Space
- Addressability of different systems
- Multiple Virtual Storage
- Paging
- Swapping
- Data Management
- Definition of data set and Record Formats
- Describe the organization of data sets
- Non – VSAM datasets
- Data Management
- VSAM Data sets
- Performance Tuning
- Label Processing
- Job management
- System generation / System initialization
- Security and Recovery

❖ **JCL:**

- Introduction to JCL
- JOB Statement
- Syntax
- Positional and Keyword parameters
- EXEC Statement
- Syntax
- Positional and keyword parameters
- DD Statements
- JES Commands
- IBM Utilities
- VSAM
- Introduction to GDG
- JCL Procedures
- SMS

❖ **COBOL:**

- Evolution and features of COBOL
- General Coding and format rules
- Language fundamentals
- Input and output verbs
- Data Movement verbs
- Arithmetic verbs
- Design and development of simple COBOL programs
- ON SIZE ERROR, COMPUTE, ROUNDED
- Sequence control verbs

- Classification of conditions
- REDEFINES
- RENAMES
- USAGE
- Intrinsic function in COBOL
- File Organizations and access methods
- Sequential file handling
- Alternate indexes in VSAM KSDS files
- COPY and CALL Verbs
- JCL and COBOL interaction through PARM parameter Table handling
- SEARCH and SEARCH ALL Verbs
- STRING
- UNSTRING
- INSPECT

❖ **CICS:**

- What is CICS?
- Brief history of CICS
- CICS System components
- Basis concepts of CICS
- Concept of a task, Transaction and Application
- CICS Control programs and control tables
- Concept of multitasking, Multithreading and Quasi - reentrancy
- Native CICS Commands
- Steps in Execution of a sample COBOL-CICS program
- CICS Architecture
- BMS
- Types of Macros
- Physical and symbolic maps
- Send/Receive map commands
- Sample Mapset development and execution
- Not to be used COBOL verbs
- Exec Interface Block (EIB)
- Pseudo conversational programming
- Validating EIBAID Keys
- Dynamic cursor positioning
- File handling
- Exception handling
- Program control operations
- Interval control operations
- Temporary Storage Queue (TSQ)
- Transient Data Queue (TDQ)
- Control operations
- Program Control
- Interval Control
- Task Control
- Storage Control

❖ **DB2:**

- DB2 Architecture
- DB2 objects
- Tablespaces
- Segmented
- Partitioned Simple
- Indexes
- Synonyms and Aliases

- DBD
- Embedded SQL
- DCLGEN Usage
- Singleton SELECT DML through embedded SQL
- COBOL-DB2 Program preparation
- Working with Cursors
- COBOL-DB2-CICS program preparation steps
- Concurrency control with different types of locks
- Isolation Level
- Issues with COBOL-DB2 Batch program
- DB2 Utilities

