

## **Cobol Programming**

#### **Audience course Cobol Programming**

The course Cobol Programming is intended for anyone who wants to learn programming in the Cobol programming language.

#### **Prerequisites Course Cobol Programming**

To participate in this course basic knowledge of programming in another programming language is beneficial to understanding but is not required.

#### **Realization Training Cobol Programming**

The theory is discussed on the basis of presentation slides. The theory is further explained through demos. After discussing a module, there is the possibility to practice. Course times are from 9.30 to 16.30.

#### **Certification Course Cobol Programming**

After successful completion of the course the participants receive an official certificate Cobol Programming.



## **Content Course Cobol Programming**

In the course Cobol Programming participants learn to develop applications in the Common Business Oriented Language (COBOL). Cobol emerged from the Conference on Data Systems Language (CODASYL) in 1959, when more and more companies in the Western World needed to automate business processes. Cobol is still widely used in banks and insurance companies, but has undergone many changes since its early days. Since the COBOL 2002 standard, Cobol also supports object-oriented programming.

#### **Cobol Intro**

The course starts with an overview of Cobol's typical features and program structure. The Cobol Metalanguage, Divisions, Sections, Paragraphs, Sentences and Statements are discussed.

#### **Data Declarations and Procedure Divisions**

Subsequently the use of Data Declarations and Procedure Divisions is treated. Attention is paid to literals, constants, variables, structured data and assignment. And also input and output and various verbs are discussed such as ACCEPT, DISPLAY, COMPUTE, ADD, SUBTRACT, MULTIPLY and DIVIDE.

### **Control Flow**

Furthermore control flow constructions in Cobol with selections and iterations are part of the course program. This includes condition types, truth tables, decision tables, the EVALUATE Metalanguage and also PERFORM..THRU, PERFORM..TIMES and PERFORM..VARYING.

#### **Subroutines**

After a discussion of subroutines in Cobol, it is the turn of a treatment of reading and writing sequential files.

#### **Records**

Attention is paid to Records, Fields, Record Buffers, Variable-Length Records and the operations SELECT, ASSIGN, OPEN, CLOSE, READ and WRITE.

#### **Arrays and Strings**

Finally the use of tabular data, arrays and strings in Cobol is explained and the course ends with the treatment of object oriented programming in Cobol with modules and classes.



# **Modules Course Cobol Programming**

Module 2 : Data Declaration	Module 3 : Procedure Division
Alphanumeric Literals	Input and Output
Numeric Literals	ACCEPT Verb
Figurative Constants	DISPLAY Verb
Data Items or Variables	System Variables
Type Enforcement	Common Arithmetic
Alphabetic Data	ROUNDED Phrase
Declaring Data	ON SIZE ERROR
PICTURE Clause	COMPUTE Verb
Assignments	ADD Verb
MOVE Verb	SUBTRACT Verb
Structured Data	MULTIPLY Verb
Data Hierarchy	DIVIDE Verb
Module 5 : Iteration	Module 6 : Sequential Files
Open Subroutines	Records and Fields
Closed Subroutines	Processing Files
PERFORM NamedBlock	Implications of Buffers
PERFORMTHRU Dangers	Creating Records
PERFORMTIMES	Record Buffers
Inline Execution	SELECT and ASSIGN
Out-of-Line Execution	OPEN and CLOSE
PERFORMUNTIL	READ and WRITE
UNTIL Condition	Multiple Records
PERFORMVARYING	Type Code
WITH TEST	Variable-Length Records
Module 8 : String Manipulation	Module 9 : Classes and Objects
INSPECT Verb	Module Strength
INSPECT TALLYING	Module Coupling
Modifying Phrases	Dictionary Class
INSPECT REPLACING	Cobol Classes
INSPECT CONVERTING	Objects and Methods
String Concatenation	Registering Classes
STRING Verb	Object References
String Splitting	Destroying Objects
Data-Movement Termination	Object Identifiers
I .	I '
UNSTRING Termination	SUPER and SELF
	Alphanumeric Literals Numeric Literals Figurative Constants Data Items or Variables Type Enforcement Alphabetic Data Declaring Data PICTURE Clause Assignments MOVE Verb Structured Data Data Hierarchy  Module 5: Iteration  Open Subroutines Closed Subroutines PERFORM NamedBlock PERFORMTHRU Dangers PERFORMTIMES Inline Execution Out-of-Line Execution PERFORMVARYING WITH TEST  Module 8: String Manipulation  INSPECT verb INSPECT TALLYING Modifying Phrases INSPECT REPLACING INSPECT CONVERTING String Concatenation STRING Verb String Splitting