

Delphi Basic Training

Goal/Benefits

This 2 day Delphi training course will introduce you to the current version of the Object Pascal programming language and the Integrated Development Environment (IDE). Following a short introduction to the basic principles of Object Oriented Programming you will be taught the fundamentals of programming with Delphi like:

- Introduce Pascal as a programming language to implement object oriented systems.

- Design and implement classes, using inheritance to specialize features of those classes.

- A quick overview of the built-in object hierarchy.

- Introduction to various loops like for-, while- and repeat loops.

- Introduction to procedures and functions.

- Introduction to database applications with livebindings.

The major objective to the course is to give you enough knowledge and hands-on experience to be able to build simple object oriented programs.

Audience/Attendees

This training is aimed at programmers who want to get a thorough and sound introduction to Delphi and programming in Delphi.

Previous knowledge

The course requires at least some experience in any other programming language. Function-, procedure- or object oriented language.

Practical Exercises

Throughout the course there will be a mix of theoretical teaching (projector and whiteboard) and practical exercises, with as much hands-on as possible.

Course outline

Introduction to Object Orientation

Through this lesson we will look at benefits on class encapsulation, and inheritance. This lesson will be very quick if all participants come from another OO language.

Overview of the IDE

A quick overview of the IDE, with an explanation of what the various parts of the IDE do.

Introduction to the Pascal language

In the introduction to the Pascal language we will build a small object oriented hierarchy to get the basic inheritance and encapsulation principles going. The hierarchy will be implemented using:

- Basic datatypes
- Inheritance
- Constructor and destructors
- Getters and setters for properties
- For-loops
- For-in-loops
- While-loops
- Repeat-loops
- Variables – Constants
- Sets
- Enumerated datatypes
- Passing by-value or by-reference
- Method Overloading
- Exceptions, and handling

Overview of some of the built-in Delphi components

In this class we will look at some of the many visual and non-visual components that we use on a daily basis to create stunning and robust Delphi applications.

- Forms, panels and buttons
- Listviews, listboxes, dropdowns and grids
- Timers
- Lists
- Menu's popup menus and actionlists
- Create a full-blown multimediaplayer in 60 seconds
- And more

Files

We will in this session see and go through some mechanisms to write data to files. This will include:

- Inifiles in the applications datadirectory
- Writing to the registry
- Simple xml-data files
- Textfiles

Project options

We will go through various settings

- The title
- Icons
- Version info
- And try different styles

Introduction to database application programming

In this section we will go through the basics of connecting to and using SQL based databases with Delphi components.

- FireDAC connection to databases – TFDConnection
- Querying and browsing database tables with which components
- Displaying and editing data in the SQL database with Livebindings
- Can we use TFDMemtable to create a file based singleuser database application?

In the database session you will learn to build a simple database application that will hold records of your own dvd's, contacts, music or whichever data you need to keep. When the course is finished you will have a complete understanding of the basics of creating a full blown working database application with Delphi. You will be able to utilize this knowledge to create even advanced database applications and thereby be able to make any database for your personal needs