## Target group

Developers who already have knowledge of other programming languages and have just started working with OpenEdge. A basic understanding of object oriented programming is necessary

## Goal

In this training you will get to know the most important language elements and tools.

## General

This agenda lists all the points that I will address and explain during the training. However, I will not necessarily go through the agenda chronologically. The explanation will be based on examples or the OpenEdge documentation that I have prepared.

## Environment

We need at minimum OpenEdge 12.2 and Progress Developer Studio. The prepared sources can be found at https://github.com/nik00iap/openedgeExcercises

## Progress OpenEdge

* Installation / DLC
* (sub)products

## Database

* How to start a database
* Database startup parameter
* Structure ( DB,BI,AI)
* Tables, Fields, Indexes, Sequences
* Most important Utility commands
* Data Dictionary , Data Administration  
  Maintaining database structures
* AdminService
* Management Console
* Databases Trigger
* Shared memory, Network connect
* Enterprise, Workgroup

## Client

* Startup parameter
* Evironment
* UI

## Development environment

* Procedure Editor
* Developer Studio
* Debugger

## Fundamental language elements

### Variables

* Primitive Datatypes
* Classes
* Clob, Memptr
* NO-UNDO
* Shared/Global Variables

### Preprocessor directives

* &SCOPED-DEFINE, &GLOBAL-DEFINE
* Conditional compilation
* &IF; &THEN; &ELSEIF; &ENDIF; DEFINED

### File types

* Procedures
* Includes
* Classes

### Loops and structure elements

* IF THEN ELSE
* DO , REPEAT Loops
* CASE

### Procedures

* Internal /external procedures
* ABL- / User-Functions
* Using persisting procedures
* Super procedures

### Systemwidgets

* SESSION,THIS-PROCEDURE,FILE-INFO,CLIPBOARD

### Error Handling

* Default Error-Handling
* NO-ERROR; ERROR-STATUS:ERROR; RETURN-VALUE
* DO ON-ERROR UNDO,LEAVE,NEXT,RETURN
* THROW/CATCH

### Debugging

* Debugalert-Option
* OpenEdge-Debugger
* Kompilation (pre;lst;dbg;xrf)

### Widgets / Triggers

* ChUI, GUI

## Database interaction

### Retrieving data

* Find
* For each
* Buffers
* Dynamic Buffers

### Queries

* Static queries
* Dynamic queries

### Database action

* Create, Update, Delete

### Locking

* NO-LOCK, EXCLUSIVE-LOCK
* Optimistic Locking
* Pessimistic Locking

### Transaction

* Scopes
* Undo
* Implicit and explicit scoping

## Complex Datahandling

### Temp Tables

* Definition
* Copy data
* Dynamic Temp Tables
* Im-/Export to JSON,XML

### ProDataSet

* Definition
* Copy data
* Dynamic ProDataSets
* Im-/Export to JSON,XML

## Object oriented programming

* Class Members (Properties, Methods, Events)
* Enum
* Public/Protected/Private
* STATIC
* Patterns (Singletons, Lazy Loading, Builder …)
* Reflection

# PASOE

* Indroduction to PASOE structure
* TCMan
* Web-Handler