



# Introduction to Object-oriented Programming for Managers (Object Rexx)



Lecture, English Program

(2007-10-12 through 2007-11-30)

Inskr.-Nr. 1220 „Schulungsraum 2“ (SCHR 2, UZA II)

Lecturer	Begin	Time of Day
Flatscher	Friday, 2007-10-12	14:00 - 18:00

## POSITION IN THE WU STUDIES (FOR THE AUSTRIAN STUDENTS)/STELLUNG IM STUDIUM

### Wahlpflichtfach (alte Studienordnung, spezielle BWL "Wirtschaftsinformatik"):

Es wird ein schriftliches Kolloquium für das CP-System angeboten. There will be the possibility of a final examination.

### English Program and Freies Wahlfach (neue Studienordnungen):

Es wird ein schriftliches Kolloquium angeboten. There will be a final examination.

## OVERVIEW

This course concentrates on a groundlaying **introduction** into the **procedural** and **object-oriented programming**. We concentrate on the **concepts** which are available to us for **object-oriented programming** and for object-oriented (commercial) application systems.

At the end of this lecture you should have learned the object-oriented paradigms, which should considerably ease your access to **object-oriented modeling** or devising **business objects**, as well as being able to understand and assess the terminology and technology.

The **knowledge** that you will have acquired thru this lecture should enable you to solve **small business-administrative** related problems at hand with your own devised procedural and/or object-oriented programs. At least you will be able to formulate **adequate problem solutions** and communicate them efficiently (using the same language) to IT professionals. In addition it should be **much easier** for you to learn and understand object-oriented modeling concepts and modeling languages (e.g. EERM, MOF/UML, MDA) and technologies (e.g. OMG CORBA, J2EE, .NET), as **you would not be shied away** by the technical terms in this area anymore.

To teach and exercise the taught concepts the „human-centric“ programming language **ooRexx** (created originally by IBM, made available as opensource by the non-profit International Rexx Language Association) will be used, which is available at least for AIX, Linux, OS/2, Solaris and Windows. available.

→ *Hint:* the syntax of ooRexx is *very simple*, such that this programming language can be **easily learned even by end-users**. Therefore the language is being deployed for creating scripts, macros and/or software prototypes.

## GOALS OF THIS LECTURE

In the context of this lecture **you will learn**

- the basics of **procedural programming** and the successful creation of procedural programs to solve simple problems on your own,
- the basics of **object-oriented programming** and the successful creation of object-oriented programs to solve simple problems on your own
- to understand and to apply the **object-oriented paradigm** in programming and modeling,
- the programming language **ooRexx** and
- as an additional benefit, **remote controlling Windows** and **Windows applications** by example. (This knowledge could immediately be applied in the lectures # 1522 "Automatisierung von Windows-Anwendungen" – „Automating Windows Applications“ - and lecture # 1525 "Automatisierung von Java-Anwendungen" – “Automating Java Applications”.)

## TYPE OF LECTURE

This course will be held as a lecture, where the students will get little assignments from installment to installment to be solved in groups of two or three.

→ *Active participation in form of questions or discussions is requested explicitly!*

## LITERATURE

- Veneskey G.L., Trosky W., Urbaniak J.J.: Object Rexx by Example. Aviar.  
URL (as of 2007-06-21): <http://www.oops-web.com/orxbyex/>
- Fosdick H.: Rexx Programmer's Reference. John Wiley & Sons, ISBN: 0-7645-7996-7,  
URL (as of 2007-06-21):  
<http://www.wrox.com/WileyCDA/WroxTitle/productCd-0764579967.html>

**DETAILED OVERVIEW OF THE LECTURE**

NR.	CONTENT	DATES
<b>Introduction into Procedural Programming</b>		
1	Overview of the lecture, history of Rexx, latest developments: ANSI Rexx, Object Rexx, ooRexx, NetRexx	2007-10-12 14:00-15:45
2	A minimal Rexx program, interactive programming ("RexxTry.cmd"), variables, constants, comments, statement, block, conditional branching, iteration	2007-10-12 16:15-18:00
3	Label, procedure, funktion, search order for functions/procedures, scopes	2007-10-19 14:00-15:45
4	Rexx-functions, "stems" (associative arrays), "RexxUtility"-functions ("RexxUtil")	2007-10-19 16:15-18:00
5	Object Rexx-extensions: routines, arguments by reference, exceptions	2007-11-09 14:00-15:45
<b>Introduction into Object-oriented Programming</b>		
6	Classes, methods, attributes, messages, scopes, creation of objects	2007-11-09 16:15-18:00
7	Inheritance, specialization, scopes, multi-threading	2007-11-23 14:00-15:45
8	Object Rexx-classes I: classification tree, defining classes, examples	2007-11-23 16:15-18:00
9	Object Rexx-classes II: classification tree, collection classes	2007-11-30 14:00-15:45
10	Object Rexx-classes III: classification tree, collection classes	2007-11-30 16:15-18:00
11	Object Rexx-Klassen IV: class methods, class attributes, meta-classes, patterns	TBA
	Excercise(s): problem(s) and solution(s); „The Big Picture“, defining classes and methods at runtime, „one-off“ objects, automation of Windows and Windows applications	

## URLS ZU (OBJECT) REXX

"Rexx Language Association" with their own "Link"-page for further Rexx resources:

<http://www.RexxLA.org/>

"Object-oriented Links", Entry: "Object Rexx":

[http://www.cetus-links.org/oo\\_rexx.html](http://www.cetus-links.org/oo_rexx.html)

NetRexx-Homepage:

<http://www2.hursley.ibm.com/netrexx/>

ooRexx-Homepage

<http://www.ooRexx.org/>

## MEANS OF COMMUNICATIONS

In order to improve the communication among and with the students the E-Mail-list **ORX2007w** has been created. To subscribe to this e-mail list you need to use the form at (be careful to write everything in lowercase letters):

<http://alice.wu-wien.ac.at/mailman/listinfo/orx2007w>

After subscribing you can send e-mail to [orx2007w@wi.wu-wien.ac.at](mailto:orx2007w@wi.wu-wien.ac.at), which in turn will cause a re-distribution of it among all people who have subscribed to this list. (More infos in the first installment.)

This e-mail list will allow you to ask any questions (there are no stupid questions!) and to discuss concepts day and night.

## NEEDED MATERIALS

You can freely download ooRexx for your own operating system from:  
<http://www.ooRexx.org/>

Foils for this lecture:

<http://wi.wu-wien.ac.at/rgf/wu/lehre/poolv/material/English/foils/>

Exercises for this lecture:

[http://wi.wu-wien.ac.at/rgf/wu/lehre/poolv/material/English/foils/exercises/poo\\_exercises.htm](http://wi.wu-wien.ac.at/rgf/wu/lehre/poolv/material/English/foils/exercises/poo_exercises.htm)