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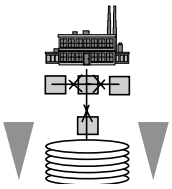

Introduction to Object-oriented Programming for Managers

VO

Lecture (Block-System, Half Semester)

(2006-03-10 thru 2006-04-08)

Inskr.-Nr. **758**„Schulungsraum 2“ (SCHR 2, UZA II)

Lecturer	Begin	Time of Day
Flatscher	Friday, **2006-03-10**	**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 professionalists.

To teach and excercise the taught concepts the „human-centric“ programming language **Open Object Rexx (ooRexx)** will be used, which is **very easy to learn**, yet very powerful and freely available for many operating systems.

GOALS OF THIS LECTURE

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

- the **concepts** of **procedural programming** and the successful creation of small ("nutshell") procedural programs to solve simple problems on your own,
- the **concepts** of **object-oriented programming** and the successful creation of small ("nutshell") object-oriented programs to solve simple problems on your own,
- to understand, to assess and even to apply the **object-oriented paradigm** in programming and modeling, to solve business-oriented problems.

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 participiation in form of questions or discussions is requested explicitly!*

LITERATURE

The following literature is *optional* (not required by any means!):

- Fosdick H.: Rexx Programmer's Reference. John Wiley & Sons, ISBN: 0-7645-7996-7, URL (as of 2006-02-03): `http://www.wrox.com/WileyCDA/WroxTitle/productCd-0764579967.html`
- Veneskey G.L., Trosky W., Urbaniak J.J.: Object Rexx by Example. Aviar. URL (as of 2006-02-03): `http://www.oops-web.com/orxbyex/`

DETAILED OVERVIEW OF THE LECTURE

NR.	CONTENT	DATES
	Introduction into Procedural Programming	
1	Overview of the lecture, history of Rexx, latest developments: ANSI Rexx, Object Rexx, ooRexx, NetRexx	2006-03-10 14:00-15:30
2	A minimal Rexx program, interactive programming ("RexxTry.cmd"), variables, constants, comments, statement, block, conditional branching, iteration	2006-03-10 15:45-17:00 17:00-18:00
3	Label, procedure, function, search order for functions/procedures, scopes	2006-03-17 14:00-15:30
4	Rexx-functions, "stems" (associative arrays), "RexxUtility"-functions ("RexxUtil")	2006-03-17 15:45-17:00 17:00-18:00
5	Object Rexx-extensions: routines, arguments by reference, exceptions	2006-03-24 14:00-15:30
	Introduction into Object-oriented Programming	
6	Classes, methods, attributes, messages ("Twiddle" = Tilde-character ~), scopes, creation of objects	2006-03-24 15:45-17:00 17:00-18:00
7	Inheritance, specialization, scopes, multi-threading	2006-03-31 14:00-15:30
8	Object Rexx-classes I: classification tree, defining classes, examples	2006-03-31 15:45-17:00 17:00-18:00
9	Object Rexx-classes II: classification tree, collection classes	2006-04-07 14:00-15:30
10	Object Rexx-classes III: classification tree, collection classes	2006-04-07 15:45-17:00 17:00-18:00
11	Object Rexx-Klassen IV: class methods, class attributes, meta-classes, patterns	2006-04-21 14:00-15:30
12	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	2006-04-21 15:45-17:00 17:00-18:00
13	Off the records: remote controlling (“automating”, “scripting”) Windows and Windows applications with object-oriented means.	2006-04-21 15:45-17:30
14	Presentation of the term projects, roundup, questions and answers.	2006-04-21 15:45-17:00 17:00-18:00

URLs (AS OF 2006-02-03)

Open Object Rexx (ooRexx) Homepage

http://www.ooRexx.org/

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

http://www.RexxLA.org/

Comprehensive information on Rexx and ooRexx:

http://www.RexxInfo.org/

Page with interesting external function packages for Rexx and ooRexx

http://www.Rexx.org/

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

http://www.cetus-links.org/oo_rexx.html

MEANS OF COMMUNICATIONS

In order to improve the communication among and with the students the E-Mail-list **ORX2006S** 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/orx2006s

After subscribing you can send e-mail to `orx2006s@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

IBM supplies Object Rexx at no costs for teaching and research.

The English foils will be made available at:

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