Business application programming - opis przedmiotu

Informacje ogólne

Nazwa przedmiotu	Business application programming
Kod przedmiotu	04.2-WE-BizElP-BAP-Er
Wydział	Wydział Nauk Inżynieryjno-Technicznych
Kierunek	Biznes elektroniczny
Profil	praktyczny
Rodzaj studiów	Program Erasmus pierwszego stopnia
Semestr rozpoczęcia	semestr zimowy 2021/2022

Informacje o przedmiocie

Semestr	4
Liczba punktów ECTS do zdobycia	4
Typ przedmiotu	obowiązkowy
Język nauczania	angielski
Sylabus opracował	• dr hab. inż. Marek Sawerwain, prof. UZ

Formy zajęć

Forma zajęć	Liczba godzin w semestrze (stacjonarne)	Liczba godzin w tygodniu (stacjonarne)	Liczba godzin w semestrze (niestacjonarne)	Liczba godzin w tygodniu (niestacjonarne)	Forma zaliczenia
Wykład	15	1	-	-	Zaliczenie na ocenę
Laboratorium	30	2	-	-	Zaliczenie na ocenę

Cel przedmiotu

Familiarize students with basic information about programming languages for business application, so called 4th generation programming languages. Most common IT tools used in business practice are been presented. To shape students' practical skills in creating applications supporting the basic tasks in business activities. Examples of applications of 4th generation programming languages in various business tasks will be also presented.

Wymagania wstępne

Programming fundamentals and basic principles in database creation

Zakres tematyczny

Introduction of basic concepts and notions related to the idea of 4th generation languages used in business activities.

Review of tools which supports 4th generation programming languages. Defining a notion of integrated system which is used in the context 4th generation programming languages. Practical exercises using such type of programming environment.

Presentation of basic syntax of 4th generation of programming language. Practical exercises in creation of 4GL basic programs.

Overview of the object model which is used in 4GL languages. Overview of class type basics, inheritance, interfaces and events. Practical exercises in the use of such type of language construction.

Determining the data sources which are suitable for given problem. Practical exercises in using data sources.

Presentation and practical examples of data operations. Reading a table content, creating dynamic columns, creating and managing files. Practical exercises with mentioned data notions.

Making screens (forms) which supports business activities. Making of report which are used in common business activities. Application of 4GL to initial analysis of data. Practical implementation of sample business reports.

Creating automated correspondence systems, creating email content, attaching additional files to main message.

Data processing including business data analysis implemented by the use of 4GL languages. Practical implementation of an example scenario for data analysis.

Providing data as a web service. Practical implementation of the process of sharing a data source as a web service.

Metody kształcenia

Lecture: conventional lecture
Laboratory: laboratory exercises, group work

Efekty uczenia się i metody weryfikacji osiągania efektów uczenia się

Opis efektu	Symbole efektów	Metody weryfikacji	Forma zajęć
Can use integrated environments that support 4GL languages.		• wykonanie sprawozdań laboratoryjnych	• Laboratorium
Can write simple programs in 4GL languages which performs basic operations.		• sprawdzian z progami punktowymi	• Laboratorium
Knows dedicated for programmers tools which use the 4GL programming languages. Student also knows 4GL tools which supports process of graphical user interface building.		• sprawdzian z progami punktowymi	• Wykład
Knows integration abilities of business systems in the context of 4GL languages where databases system are used.		• sprawdzian z progami punktowymi	• Wykład
Student has knowledge about analytical possibilities offered by 4GL languages.		• sprawdzian z progami punktowymi	• Wykład
Student has skills in the use of ready-made data sources and in creating of a new databases for the implementation of a given business task.		• wykonanie sprawozdań laboratoryjnych	• Laboratorium
Student is able to create a basic statistical analysis based on the received data using the capabilities of 4GL languages.		• sprawdzian z progami punktowymi	• Laboratorium
Student is able to use 4GL tools to create reports, to support data analysis. Student can create screen forms which are allows for easier data input and present other information.		• wykonanie sprawozdań laboratoryjnych	• Laboratorium
Student knows the basics of 4GL language syntax and the object paradigm supporting the process of creating business solutions.		• sprawdzian z progami punktowymi	• Wykład
Understands necessity to expand knowledge related to the technical aspects of an integrated work environment and the dynamic development of 4GL programming tools.		• sprawdzian z progami punktowymi	• Wykład • Laboratorium
Using 4GL programming environment, student knows how to share the developed data for other applications or users.		• wykonanie sprawozdań laboratoryjnych	• Laboratorium

Warunki zaliczenia

Lecture – the main condition to get a pass is obtaining a positive grade in the final written exam.

Laboratory – the main condition to get a pass are sufficient marks for all laboratory exercises and tests conducted during the semester.

Calculation of the final grade: lecture 50% + laboratory 50%.

Literatura podstawowa

1. Bandari, K., Complete ABAP, 2nd edition, SAP Press, 2020

2. Kale, V., Implementing SAP R/3: The Guide for Business and Technology Managers, Sams Publishing , 1st edition, 2000.

3. Schneider, T., Gahm, H., Westenberger, E., ABAP Development for SAP HANA, SAP Press, 2014.

4. McDonough, J. E.: Object-Oriented Design with ABAP A Practical Approach, Apress, 2017.

5. Markandeya, S.: Pro SAP Scripts, Smartforms, and Data Migration ABAP Programming Simplified, Apress 2017.

Literatura uzupełniająca

1. Coughlan, M., Beginning COBOL for Programmers, Apress, 2014.

2. Markandeya, S., Roy, K., AP ABAP Hands-On Test Projects with Business Scenarios, Apress, 2014.

3. Stern, N.B., Stern, R.A., Ley, J.P., COBOL for the 21st Century, John Wiley & Sons, 11th ed., 2013.

4. Kale, V., Implementing SAP CRM: The Guide for Business and Technology Managers, Auerbach Publications, 2019.

Uwagi

Zmodyfikowane przez dr hab. inż. Marek Sawerwain, prof. UZ (ostatnia modyfikacja: 13-07-2021 09:39)