



[GSXAB2ABNE] Databases

Intézet:	Vállalkozásfejlesztés és Infokommunikációs Intézet (1084 Budapest, Tavaszmező u. 17.)		Kreditérték:	5
Tagozat:	Nappali		Nyelv:	magyar
			Félév:	2021/22/2
Szakok: Technical Management BSc;				
Tantárgyfelelős oktató: Dr. Keszhelyi András		Oktatók: Esmeralda Kadena;		
Heti/Féléves óraszámok: Heti <input type="text"/> Előadás: <input type="text" value="2"/>		Tantermi gyakorlat: <input type="text" value="2"/> Labor: <input type="text" value="0"/> Konzultáció: <input type="text" value="0"/>		
Félérvázár módja (követelmény): vizsga				
Oktatási cél: Students will learn the conceptual basics and the realization of database management systems, the process of data modelling and database planning, modern data management methods. They will also learn the basics of SQL language and some operational aspects using a relational database management tool (most probably MYSQL).				
Félévközi követelmények (feladat, zrt. dolgozat, esszé, stb.): Test 1 (mid-semester) 10%, Test 2 (end-of-semester) 20%, Group project (Case study) 20%, Individual project (Case study) 50%				
Oktatási hét (konzultáció)		Témakör		
1.		Models and data modelling in general. The relational way of database management. Data, information, process of getting messages. Data modelling example I.		
2.		Example data model Data modelling example II.		
3.		Tools and methods of data modelling, identification DQL: structure of SQL commands, select		
4.		Conceptual, logical and physical levels of database planning DQL: multiple table queries and group functions		
5.		Relationships and their attributes, realization in SQL DQL: sub-queries		
6.		Typical modelling errors/mistakes, their reasons Different exercises		
7.		Redundancy and normalization, semantic normalization DML: insert, update, delete		
8.		Special structural factors, elements and problems DDL: create, alter, drop		
9.		Critical elements in database planning DDL: triggers		
10.		Missing values, problems related to NULL mark DTL: transactions		
11.		Problems, questions and rules of operating a database Different exercises		
12.		Basics of data protection and data security DCL: grant, revoke		
13.		Summary Operational aspects, export, import, backup		
14.		Test Consultation		
Kötölöz irodalom: Given parts from: Garcia-Molina, Ullmann, Widom (2008). Database Systems: The Complete Book, Pearson/Prentice Hall, 2009. https://people.inf.elte.hu/miiqueai/elektroModulatorDva.pdf Given parts from: MySQL Online Documentation https://dev.mysql.com/doc/refman/5.7/en/				
Ajánlott irodalom: Garcia-Molina, Ullmann, Widom (2008). Database Systems: The Complete Book, Pearson/Prentice Hall, 2009. https://people.inf.elte.hu/miiqueai/elektroModulatorDva.pdf				