

STUDENT ACTIVITY 4.1 KEY

MTA Course: Database Administration Fundamentals

Topic: Understand normalization

File name: DBAdminFund_SA_4.1_Key

Lesson Objective:

4.1: Understand normalization. *This objective may include but is not limited to:* understanding the reasons for normalization, the five most common levels of normalization, how to normalize a database to third normal form.

Create tables as indicated here for each of the first three normalization forms.

Last	First	Birthday	Tuition	Sex	Subject	Room	Start Time 1	Subject2	Room2	Start Time 2	costs class1	cost class2	fees per hour1	credit hours class 1	credit hours class 2	fees per hour2
Holt	Holly	10/5/1990	10000	F	English	Hall A	1:00 PM	Social Studies	4576c	6:00 PM	480	700	120	4	5	140
Raheem	Michael	6/18/1990	4000	M	CIS	Hall 12	3:00 PM	Social Studies	4576c	6:00 PM	600	700	150	5	5	140
Raheem	Michael	6/18/1990	4000	M	CIS	Hall 12	3:00 PM	Social Studies	4576c	6:00 PM	600	700	150	5	5	140
Jacobsen	Lola	8/7/1997	9000	F	Social Studies	4576c	6:00 PM	English	Hall A	1:00 PM	700	480	140	5	4	120
Higa	Sidney	11/21/2000	12000	F	English	Hall A	1:00 PM	Math	2354c	4:00 PM	480	1404	120	4	6	234
Johnson	Brian	4/15/1989	500	M	English	Hall A	1:00 PM	Math	2354c	4:00 PM	1404	1701	234	6	3	567
Raheem	Michael	6/18/1990	4000	M	CIS	Hall 12	3:00 PM	Social Studies	4576c	6:00 PM	600	700	150	5	5	140
Bentley	Sean	2/17/1990	350	M	Science	Hall B	2:00 PM	Social Studies	4576c	6:00 PM	1701	700	567	3	5	140
Price	Jeff	10/5/1990	2000	M	Social Studies	4576c	6:00 PM	CIS	Hall 12	3:00 PM	700	600	140	5	5	150
Raheem	Michael	6/18/1990	4000	M	CIS	Hall 12	3:00 PM	Social Studies	4576c	6:00 PM	600	700	150	5	5	140
Ashton	Chris	1/1/1951	50	M	Social Studies	4576c	6:00 PM	CIS	Hall 12	3:00 PM	480	1404	120	4	6	234

Use the First Normal Form (1NF) with the previous table. Create separate tables for each group of related data and identify each row with a unique column (the primary key). (There are other possible solutions.)

StudentID	Last	First	Birthday	Tuition	Sex	Subject	Room	S_Time 1	Subject 2	Room 2	S_Time 2	Costs 1	Cost 2
1	Holt	Holly	10/5/1990	10000	F	English	Hall A	1:00 PM	Social Studies	4576c	6:00 PM	480	700
2	Raheem	Michael	6/18/1990	4000	M	CIS	Hall 12	3:00 PM	Social Studies	4576c	6:00 PM	600	700
3	Jacobsen	Lola	8/7/1997	9000	F	Social Studies	4576c	6:00 PM	English	Hall A	1:00 PM	700	480
4	Higa	Sidney	11/21/2000	12000	F	English	Hall A	1:00 PM	Math	2354c	4:00 PM	480	1404
5	Johnson	Brian	4/15/1989	500	M	English	Hall A	1:00 PM	Math	2354c	4:00 PM	1404	1701
6	Bentley	Sean	2/17/1990	350	M	Science	Hall B	2:00 PM	Social Studies	4576c	6:00 PM	1701	700
7	Price	Jeff	10/5/1990	2000	M	Social Studies	4576c	6:00 PM	CIS	Hall 12	3:00 PM	700	600
8	Ashton	Chris	1/1/1951	50	M	Social Studies	4576c	6:00 PM	CIS	Hall 12	3:00 PM	480	1404

Student_Info *Primary Keys

98-364 DATABASE ADMINISTRATION FUNDAMENTALS

Class_ID	Subject	Room	Start Time	credit hours	fees						
1	English	Hall A	1:00 PM	4	120						
2	CIS	Hall 12	3:00 PM	5	150						
3	Social Studies	4576c	6:00 PM	5	140						
4	Science	Hall B	2:00 PM	4	567						
5	Math	2354c	4:00 PM	6	234						

Class_Info *Primary Keys

