# CIS 6300 HOMEWORK ASSIGNMENT 1 Modeling Databases using E/R Diagrams

**SAMPATH TALLURI** 

WIN: 3189950899

DATE: 09/06/2019

- ➤ Data Dictionary
- ➤ Dependency Diagrams
- ➤ ER Diagram

**Entity: STUDENT** 

Attributes: STUDENT\_ID, STUDENT\_NAME, STUDENT\_ADDRESS, STUDENT\_ADVISOR,

STUDENT\_DEPARTMENT, STUDENT\_LEVEL **Primary Key:** STUDENT\_NAME, STUDENT\_ID

Foreign Key: DEPARTMENT\_NAME, PROFESSOR\_NAME

**Entity:** PROFESSOR

Attributes: PROFESSOR\_ID, PROFESSOR\_NAME, PROFESSOR\_AGE, COURSE\_NAME, COURSE\_NUMBER,

DEPARTMENT\_NAME, PHONE\_NUMBER

Primary Key: PROFESSOR\_NAME

Foreign Key: DEPARTMENT\_NAME, COURSE\_NAME

**Entity:** COURSES

Attributes: COURSE\_NUMBER, COURSE\_NAME, DEPARTMENT\_NAME, COURSE\_DATE,

COURSE SEMESTER, NUMBER OF ENROLLMENT, COURSE SCHEDULE

Primary Key: COURSE NUMBER, COURSE SEMESTER

Foreign Key: DEPARTMENT\_NAME

**Entity: DEPARTMENT** 

Attributes: DEPARTMENT ID, DEPARTMENT NAME, DEPARTMENT HEAD, COURSE NAME

**Primary Key:** DEPARTMENT\_NAME

Foreign Key: COURSE NAME

**Entity: COURSE EVALUATION** 

Attributes: FEEDBACK, STUDENT\_NAME, PROFESSOR\_NAME, COURSE\_NAME, COIURSE\_NUMBER

**Primary Key: NONE** 

Foreign Key: PROFESSOR\_NAME, COURSE\_NAME, COURSE\_NUMBER

**Entity:** RESULTS

Attributes: STUDENT ID, STUDENT NAME, STUDENT MARKS, STUDENT GRADE, COURSE SEMESTER

**Primary Key: NONE** 

Foreign Key: STUDENT NAME, COURSE SEMESTER, STUDENT ID

# **Sample Data Dictionary Entries for Two Entities**

#### **ENTITY: STUDENT**

Attribute	Description	Datatype	Data	Sample Value	Primary	Foreign	Derived
			Format		key?	Key?	Attribute
							?
STUDENT_ID	WIN Number	Numeric	Autonum	319950899	YES	NO	NO
			ber				
STUDENT_N	Student	Character	Text	Sampath Talluri	YES	NO	NO
AME	Name						
STUDENT_A	Student	Character	Text	133 S KENDALL	NO	NO	NO
DDR	Address			MANNOR,			
				APT#102			
DEPARTMEN	Department	Character	Text	Computer	NO	YES	NO
T_NAME	Name			Science			
PROFESSOR	Advisor	Character	Text	Dr.Muhammad	NO	YES	NO
_NAME	Name			Razi			
STUDENT_LE	Student	Character	text	Masters	NO	NO	NO
VEL	Level						

#### **ENTITY: PROFESSOR**

Attribute	Description	Datatype	Data	Sample Value	Primar	Foreign	Derived
			Format		y key?	Key?	Attribut e?
PROFESSOR _ID	Professor ID	Numeric	Autonumbe r	100000000	NO	NO	NO
PROFESSOR	Professor	Character	Text	Dr.Muhammad	YES	NO	NO
_NAME	Name			Razi			
PROFESSOR	Professor	Numeric	Integer	40	NO	NO	NO
_AGE	Age						
DEPARTME	Departmen	Character	Text	Computer	NO	YES	NO
NT_NAME	t Name			Science			
PHONE_NU	Professor	Numeric	Autonumbe	(269) 387-5524	NO	NO	NO
MBER	Phonenum		r				
	ber						
COURSE_NU	Course	Numeric	Integer	6300	NO	NO	NO
MBER	Number						
COURSE_NA	Course	Character	Text	Business Data	NO	YES	NO
ME	Name			Management			

#### **ENTITY: COURSE**

Attribute	Descriptio	Datatyp	Data	Sample	Primar	Foreig	Derived
	n .	e	Form	Value	y key?	n Key?	Attribut
			at				e?
COURSE_NUMBER	Course	Numeric	Intege	6300	YES	NO	NO
	number		r				
COURSE_NAME	Course	Charact	Text	Business	YES	NO	NO
	Name	er		Data			
				Manageme			
				nt			
DEPARTMET_NAME	Departme	Charact	Text	Computer	NO	YES	NO
	nt Name	er		Science			
COURSE_SEMESTER	Course	Charact	Text	Fall 2019	NO	YES	NO
	Semester	er					
COURSE_DATE	Course	Charact	Text		NO	NO	NO
	Date	er		09/08/19			
COURSE_SCHEDULE	Schedule	Charact	Text	Online	NO	NO	NO
		er					
NUMBER_OF_ENROLLM	Total	Numeric	Intege	20	NO	NO	NO
ENT	Seats		r				

#### **ENTITY: DEPARTMENT**

Attribute	Description	Datatype	Data	Sample Value	Primar	Foreig	Derived
			Form		y key?	n Key?	Attribute
			at				?
DEPARTMENT_ID	Departmen	Numeric	Integ	100	NO	NO	NO
	t ID		er				
DEPARTMENT_NAM	Departmen	Characte	Text	Computer	YES	NO	NO
E	t Name	r		Science			
DEPARTMENT_HEA	Departmen	Characte	Text	Dr. J. Michael	NO	NO	NO
D	t Head	r		Tarn			
COURSE_NAME	Course	Characte	Text	Business Data	NO	YES	NO
	Name	r		Management			

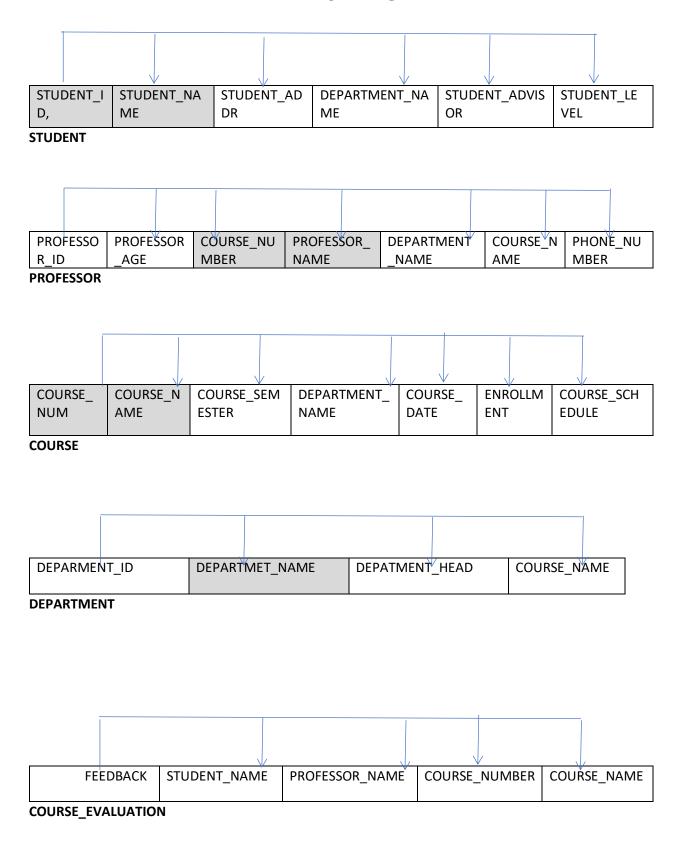
### **ENTITY: COURSE\_EVALUATION**

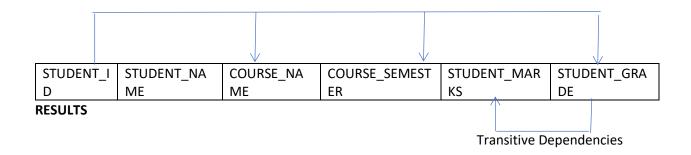
Attribute	Descriptio	Datatype	Data	Sample	Primar	Foreig	Derived
	n		Forma	Value	y key?	n Key?	Attribute
			t				?
FEEDBACK	Feedback	Characte	Text	Excellent	NO	NO	NO
		r					
STUDENT_NAME	Student	Characte	Text	Sampath	NO	YES	NO
	Name	r		Talluri			
PROFESSOR_NAM	Professor	Characte	Text	Dr.	NO	YES	NO
E	Name	r		Muhammad			
				Razi			
COURSE_NUMBER	Course	Numeric	Intege	6300	NO	YES	NO
	Number		r				
COURSE_NAME	Course	Characte	Text	Business	NO	YES	NO
	Name	r		Data			
				Managemen			
				t			

#### **ENTITY: RESULTS**

Attribute	Descriptio	Datatype	Data	Sample	Primar	Foreig	Derived
	n		Format	Value	y key?	n Key?	Attribute
							?
STUDENT_ID	WIN	Numeric	Autonumbe	319950899	NO	YES	NO
	Number		r				
STUDENT_NAM	Student	Characte	Text	Sampath	NO	YES	NO
E	Name	r		Talluri			
COURSE_NAME	Course	Characte	Text	Business	NO	YES	NO
	Name	r		Data			
				Manageme			
				nt			
STUDENT_MARK	Marks	Numeric	Integer	90	NO	NO	NO
S							
STUDENT_GRAD	Grades	Characte	Text	Α	NO	NO	NO
E		r					

#### **DEPENDENCY DIAGRAM**





## **SAMPLE ER Diagram**

