

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, COURSE_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 Format	Sample Value	Primary key?	Foreign Key?	Derived Attribute ?
STUDENT_ID	WIN Number	Numeric	Autonumber	319950899	YES	NO	NO
STUDENT_NAME	Student Name	Character	Text	Sampath Talluri	YES	NO	NO
STUDENT_ADDRESS	Student Address	Character	Text	133 S KENDALL MANNOR, APT#102	NO	NO	NO
DEPARTMENT_NAME	Department Name	Character	Text	Computer Science	NO	YES	NO
PROFESSOR_NAME	Advisor Name	Character	Text	Dr.Muhammad Razi	NO	YES	NO
STUDENT_LEVEL	Student Level	Character	text	Masters	NO	NO	NO

ENTITY: PROFESSOR

Attribute	Description	Datatype	Data Format	Sample Value	Primary key?	Foreign Key?	Derived Attribute?
PROFESSOR_ID	Professor ID	Numeric	Autonumber	100000000	NO	NO	NO
PROFESSOR_NAME	Professor Name	Character	Text	Dr.Muhammad Razi	YES	NO	NO
PROFESSOR_AGE	Professor Age	Numeric	Integer	40	NO	NO	NO
DEPARTMENT_NAME	Department Name	Character	Text	Computer Science	NO	YES	NO
PHONE_NUMBER	Professor Phonenum ber	Numeric	Autonumber	(269) 387-5524	NO	NO	NO
COURSE_NUMBER	Course Number	Numeric	Integer	6300	NO	NO	NO
COURSE_NAME	Course Name	Character	Text	Business Data Management	NO	YES	NO

ENTITY: COURSE

Attribute	Description	Datatype	Data Format	Sample Value	Primary key?	Foreign Key?	Derived Attribute?
COURSE_NUMBER	Course number	Numeric	Integer	6300	YES	NO	NO
COURSE_NAME	Course Name	Character	Text	Business Data Management	YES	NO	NO
DEPARTMENT_NAME	Department Name	Character	Text	Computer Science	NO	YES	NO
COURSE_SEMESTER	Course Semester	Character	Text	Fall 2019	NO	YES	NO
COURSE_DATE	Course Date	Character	Text	09/08/19	NO	NO	NO
COURSE_SCHEDULE	Schedule	Character	Text	Online	NO	NO	NO
NUMBER_OF_ENROLLMENT	Total Seats	Numeric	Integer	20	NO	NO	NO

ENTITY: DEPARTMENT

Attribute	Description	Datatype	Data Format	Sample Value	Primary key?	Foreign Key?	Derived Attribute?
DEPARTMENT_ID	Department ID	Numeric	Integer	100	NO	NO	NO
DEPARTMENT_NAME	Department Name	Character	Text	Computer Science	YES	NO	NO
DEPARTMENT_HEAD	Department Head	Character	Text	Dr. J. Michael Tarn	NO	NO	NO
COURSE_NAME	Course Name	Character	Text	Business Data Management	NO	YES	NO

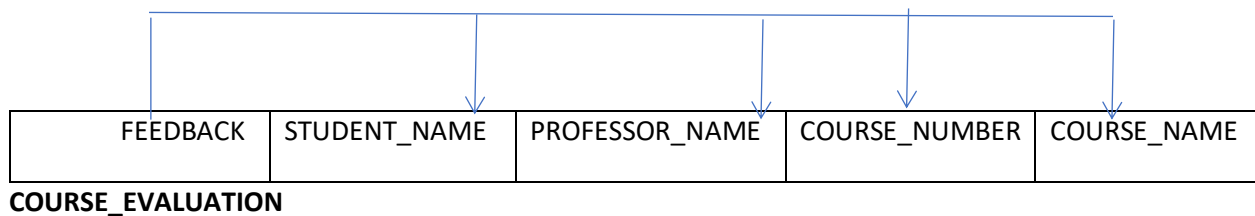
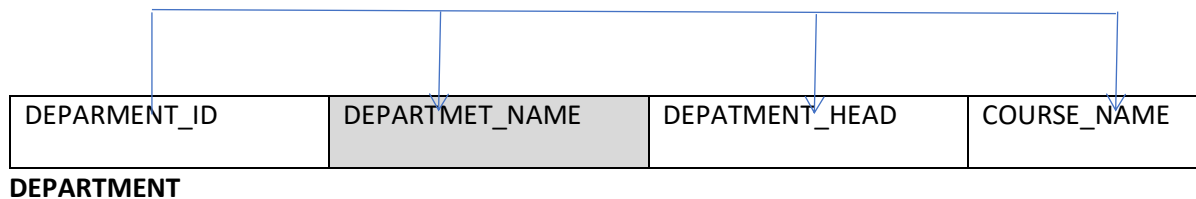
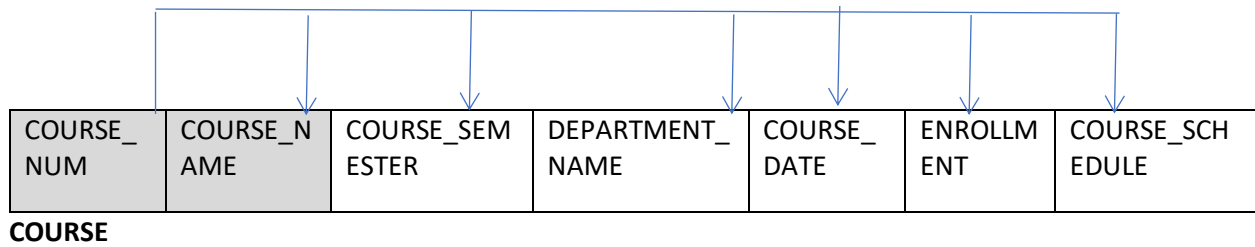
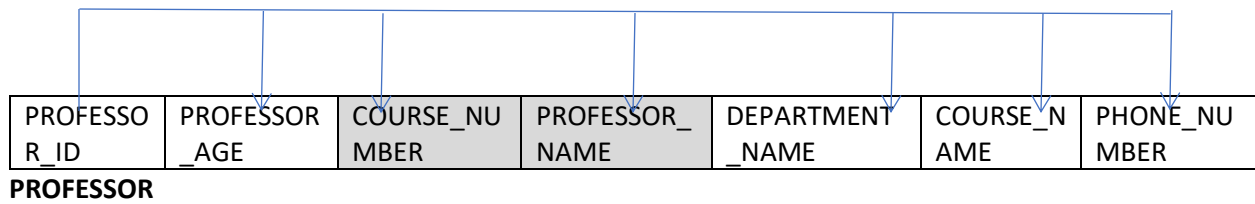
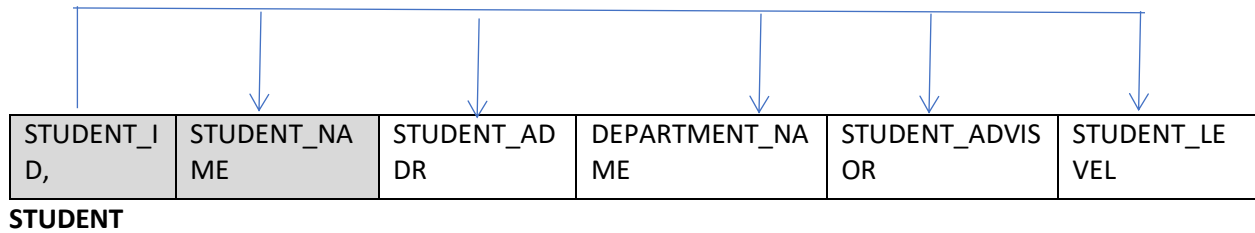
ENTITY: COURSE_EVALUATION

Attribute	Description	Datatype	Data Format	Sample Value	Primary key?	Foreign Key?	Derived Attribute?
FEEDBACK	Feedback	Character	Text	Excellent	NO	NO	NO
STUDENT_NAME	Student Name	Character	Text	Sampath Talluri	NO	YES	NO
PROFESSOR_NAME	Professor Name	Character	Text	Dr. Muhammad Razi	NO	YES	NO
COURSE_NUMBER	Course Number	Numeric	Integer	6300	NO	YES	NO
COURSE_NAME	Course Name	Character	Text	Business Data Management	NO	YES	NO

ENTITY: RESULTS

Attribute	Description	Datatype	Data Format	Sample Value	Primary key?	Foreign Key?	Derived Attribute?
STUDENT_ID	WIN Number	Numeric	Autonumber	319950899	NO	YES	NO
STUDENT_NAME	Student Name	Character	Text	Sampath Talluri	NO	YES	NO
COURSE_NAME	Course Name	Character	Text	Business Data Management	NO	YES	NO
STUDENT_MARKS	Marks	Numeric	Integer	90	NO	NO	NO
STUDENT_GRADE	Grades	Character	Text	A	NO	NO	NO

DEPENDENCY DIAGRAM



STUDENT_ID	STUDENT_NAME	COURSE_NAME	COURSE_SEMESTER	STUDENT_MARKS	STUDENT_GRADE
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RESULTS

Transitive Dependencies

SAMPLE ER Diagram

