COMP 1805A
Assignment 4
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Problem 1 : Movies ER Model

R1.1

MovieTitle, Director -> Producer
SPTitle, Author -> temp
ActorName -> Phone, Address, AgentName
Scene#, SPTitle, Author -> StoryLocation, FilmLocation
Take#, Scene# -> Date, Time

R1.2

MovieTitle, Director -> Producer
ActorName -> Phone
ActorName -> Address
ActorName -> AgentName
Scene#, SPTitle, Author -> StoryLocation
Scene#, SPTitle, Author -> FilmLocation
Take#, Scene# -> Date
Take#, Scene# -> Time

R1.3

MovieTitle	Director	Producer

ActorName	Phone	Address	AgentName

Scene#	SPTitle	Author	StoryLocation	FilmLocation

Take#	Scene#	Date	Time

Problem 2 : Fakebooks ER Model

R2.1

songID -> SONGS_title, composer
code -> BOOKCODES_title, publisher, date
userID -> password, name, emailAddress
songID, code -> length, page
code, userID -> pdfFileName, pageOffset

R2.2

songID -> SONGS_title
songID -> composer
code -> BOOKCODES_title
code -> publisher
code -> date
userID -> password
userID -> name
userID -> emailAddress
songID, code -> length
songID, code -> page
code, userID -> pdfFileName
code, userID -> pageOffset

R2.3

songID	SONGS_title	composer

code	BOOKCODES_title	publisher	date

userID	password	name	emailAddress

songID	code	length	page

code	userID	pdfFileName	pageOffset

Problem 3 : Attribute-Based Design

R3.1

Stdnum -> stdname, stdemail, stdaddress
Stdemail -> stdname, stdnum, stdaddress
City -> area_code, office_code
Stdnum, stdaddress -> area_code, office_code, station_code, city, strnum, street, postcode
Postcode -> city
Course_section -> term, year, section_letter
Course_number -> department_name, course_name
Period, room, term -> course_section
Room_num -> building
Stdnum, course_num -> grade, section

R3.2

Stdnum -> stdname
Stdnum -> stdemail
Stdnum -> stdaddress
City -> area_code
City -> office_code
Stdnum, stdaddress -> area_code
Stdnum, stdaddress -> office_code
Stdnum, stdaddress -> station_code
Stdnum, stdaddress -> city
Stdnum, stdaddress -> strnum
Stdnum, stdaddress -> street
Stdnum, stdaddress -> postcode
Course_section -> section_letter
Course_section -> term
Course_section -> year
Course_number -> department_name
Course_number -> course_name
Period, room, term -> course_section
Room_num -> building
Stdnum, course_num -> grade
Stdnum, course_num -> section

R3.3

Stdnum	Stdname	Stdaddress	stdemail

City	Area_code	Office_code

Stdnum	stdaddress	Area_code	Office_code	Station_code	City	Strnum	Street	psotcode

Course_section	Section_letter	Term	year

Course_number	Course_name	Department_name

Period	Room	Term	Section_number

Room_num	building

Std_num	course_num	Grade	section

Problem 4 : Attribute-Based Project Database

R4.1

Attribute	Comment
Title	The title of the class i.e., Fundamentals of Databases
Id	The id of the class i.e., COMP3005
Grades	The grades of all the students currently in class
Prerequisites	The classes and grades needed to take this class
Current_classes	The classes a student or prof is currently taking
Previous_classes	The classes a student has already taken
Required_classes	The classes a student needs to take
Student_number	The student number
Student_email	The student email
Student_name	The student name
Program	The student program of study i.e., Software Engineering
Cgpa	The student Carleton grade point average i.e., 10.0/12.0
Prof_id	The professor id
Prof_email	The professor email
Prof_name	The professor name
Background	The professor background of study i.e., Databases

R4.2

1) Students can have only one name, cgpa, email and student number
2) The combination of the students' email, and student number identify a particular student
3) The combination of a student number, program and id will identify required classes, current classes, and previous classes that the student needs, is or has taken
4) The combination of an id and a title can identify the grades and prerequisites of a class
5) The combination of a prof_email and a prof_id can identify the name and background of a professor
6) Professors can only have one email, name, and prof_id
7) The combination of a prof_id and an id will identify the classes a professor teaches

R4.3

Student_number, email -> name, program, cgpa
Required_classes -> current_classes, previous_classes
Id, title -> grades, prerequisites
Prof_id, email -> name, background
Student_number, id, program -> required_classes, current_classes, previous_classes
Prof_id, id -> prerequisites, title, grades

R4.4

Student_number, email -> name
Student_number, email -> program
Student_number, email -> cgpa
Id, title -> prerequisites
Id, title -> grades
Prof_id, email -> name
Prof_id, email -> background
Student_number, id, program -> required_classes
Student_number, id, program -> current_classes
Student_number, id, program -> previous_classes
Prof_id, id -> prerequisites
Prof_id, id -> title
Prof_id, id -> grades

R4.5

Student_number	Email	Name	Program	cgpa

Id	Title	Prerequisites	grades

Prof_id	Email	Name	background

Student_number	Id	Program	Required_classes	Current_classes	Previous_classes

Prof_id	Id	Prerequisites	Title	grades