



1. Step: Design a relational Model for a student enrollment system for a small College.

The following information is given:

Information about students: The College assigns a studentID to each student, it is an alphanumeric field. The name should be stored as first and last name. Additional information to be tracked is date of birth and address information.

The following e-mail was sent to the database designer:

Hello Jack:

Here is the requested information about our facilities and classrooms:

We use four main locations. These are the locations in San Francisco:

San Francisco Downtown Center at 425 Market Street, CA 94102

Laguna Street Campus at 55 Laguna Street, CA 94102

Caliber Learning Center at 60 Spear Street, CA 94102

And sometimes we also have classes in Fremont:

Fremont Center at 686 Warm Springs Blvd., CA 94879

The following classrooms are available for classes(codes for facilities and rooms in parentheses):

Fremont Center (FREM)	Room #:12 Capacity: 50, Lecture Room (FREM12)
Fremont Center (FREM)	Room #:15 Capacity: 15, Lecture Room (FREM15)
Caliber Learning Center (SFACAL)	Room #:2 Capacity: 34, Computer Lab (SFACAL2)
Caliber Learning Center(SFACAL)	Room #:4 Capacity: 24, Computer Lab (SFACAL4)
San Francisco Downtown Center (SFDTC)	Room #:809 Capacity: 25, Lecture Room(SFDTC809)
San Francisco Downtown Center(SFDTC)	Room #:812 Capacity: 40, Computer Lab(SFDTC812)
San Francisco Downtown Center(SFDTC)	Room #:814 Capacity: 40, Computer Lab(SFDTC814)
Laguna Street Campus (SFLAG)	Room #:205 Capacity: 30, Lecture Room (SFLAG205)
Laguna Street Campus (SFLAG)	Room #:AUD Capacity: 150, Auditorium (SFLAGAUD)
Laguna Street Campus (SFLAG)	Room #:B4 Capacity: 20, Photography Lab (SFLAGB4)

I hope this is sufficient information. Please do not hesitate to contact me if you need further information.

Sincerely,

Don Acker
Associate Dean



The college offers courses three times a year: Spring, Summer, Fall. Each term has a specific start and end date. Due to the popularity of some specific courses, there could be more than one section of a course.

The following table lists the instructors and their teaching departments:

115-88-9845	Valentine	Robert	Ph.D.	4587 Morgan Ave Pleasanton CA, 96877	Mathematics
115-88-9845	Valentine	Robert	Ph.D.	4587 Morgan Ave Pleasanton CA, 96877	Applied Computing
258-68-7451	Fox	Michael	Bachelor	89 University Street Daly City CA, 94158	Applied Computing
587-96-4578	Moll	Barbara	Master	857 Alcatraz Ave Berkeley CA, 94609	Biology
587-96-4578	Moll	Barbara	Master	857 Alcatraz Ave Berkeley CA, 94609	Applied Computing
589-66-5447	Lawrence	Chelsea	Ph.D.	47 Bay View Road San Francisco CA, 94105	Statistics
589-66-5447	Lawrence	Chelsea	Ph.D.	47 Bay View Road San Francisco CA, 94105	Applied Computing

Currently, the college offers the following courses:

CourseID	CourseDescription	CourseCatalog
MSACBG	Beginning MS Access	This course introduces you to fundamental relational database management system (RDBMS) concepts and data normalization principles, providing you with a foundation for creating simple queries, forms, and reports. Upon successful completion you should be able to apply these new skills to create database tables and simple queries for viewing, sorting, filtering, and analyzing data. Finally, you should be able to design simple forms for data input and simple reports for data output.
MSACDV	Developing Applications using MS Access	This course covers advanced tables, queries, forms, and reports, beginning with an overview of RDBMS theory and data formats. Data import and export is covered in detail, followed by advanced queries such as Crosstab, Action, and structured query language (SQL) queries. You create and customize forms and reports from scratch, using all types of controls including ActiveX controls. You are introduced to macros to automate data management and further customize forms and reports. Finally, you build a menu-driven application as part of a workshop, where you apply your new skills and combine all main objects into a mini-application.
MSACAD	Advanced MS Access using MS Access	This course introduces you to Visual Basic for Applications (VBA), the programming interface and the event-driven model in Microsoft Access. You receive a solid foundation in database programming. The course covers, in detail, declaring variables and scope, the lifetime of variables, and controlling executions (if-end-if, loops, etc). The Microsoft object model and hierarchy are introduced. Error handling and debugging an application are covered, followed by Data Access Objects (DAO). You see several examples of customized data validation in forms and special formatting in reports through code.



2. Step: Create tables and relationships

A) The following tables need to be created:

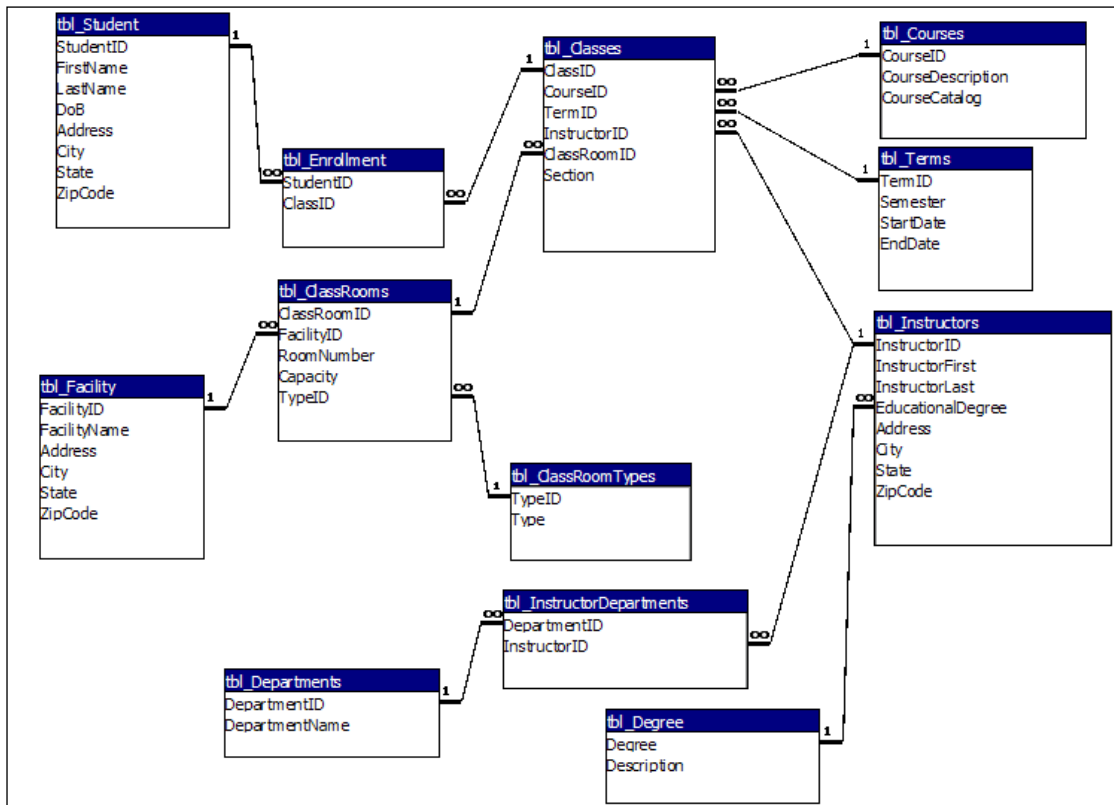
tbl_Facility

Name	Type	Size
FacilityID	Text	6
FacilityName	Text	50
Address	Text	50
City	Text	50
State	Text	2
ZipCode	Text	9

tbl_Terms

Name	Type	Size
TermID	Text	6
Semester	Text	50
StartDate	Date	
EndDate	Date	

B) Create primary keys for all tables and then relationships. Make sure to enforce referential integrity.





3. Step: Create the following forms:

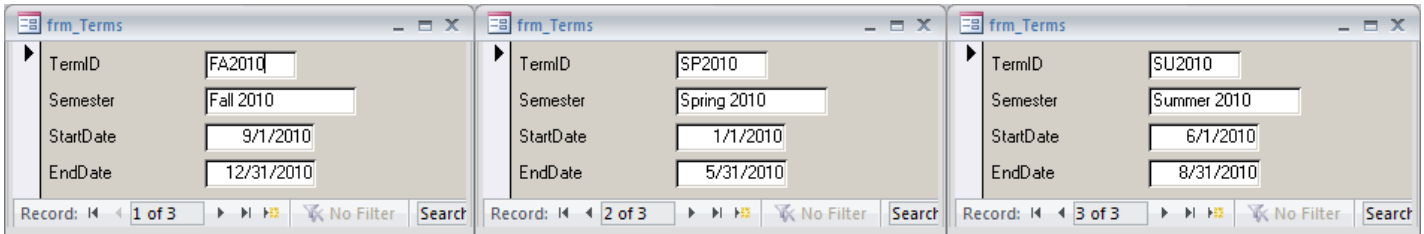
A) Instructor Form: (based on tbl_Instructors, tbl_InstructorDepartments)

B) Facilities Form: (based on tbl_Facilities, tbl_ClassRooms)

C) Enter all facilities and their associated classrooms

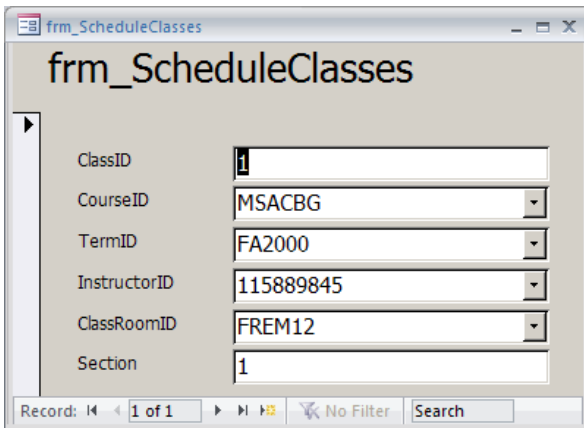


D) Terms Form: (based on tbl_Terms):



E) Enter Term data as shown above.

F) Schedule Classes Form (based on tbl_Classes):



G) Schedule all classes in Fall 2010: 2 sections of MS Access Beginning, 1 section of Developing Applications, 1 Section of Advanced MS Access. Choose any instructor and any room.

H) Enter the following enrollments using frm_EnrollStudents:

Advanced MS Access using MS Access, Section 1:	
Blue, Harry Chorus, Terra Christelle, Boosie	Forrest, Kay Green, Leslie
Beginning MS Access, Section 1	Beginning MS Access, Section 2
Chorus, Terra Forrest, Kay Golf, Kevin Logan, Peter Morgenstar, Karina Richter, Paige Wright, Michele Zuliani, Jose Maria	Christelle, Boosie Crepier, Dolly Crow, Michael Green, Leslie Knowledge, Robert Matsunuma, Yasutaka Walters, Barbara Blue, Harry
Developing Applications using MS Access, Section 1	
Blue, Harry Christelle, Boosie Logan, Peter Walters, Barbara	Lopez, Dolly Matsunuma, Yasutaka Morgenstar, Karina Richter, Paige



4. Step: Create the following reports

Choose File, Access Options, Advanced, Printing, and set all page margins to 0.25". Choose landscape when creating these reports.

A) rpt_CoursesStudent

CourseDescription	Section	InstructorFirst	InstructorLast	RoomNumber	FacilityName	LastName	FirstName
Advanced MS Access using MS Access							
	1	Robert	Valentine	12	Fremont Center	Blue	Harry
						Chorus	Terra
						Christelle	Boosie
						Forrest	Kay
						Green	Leslie
Beginning MS Access							
	1	Robert	Valentine	2	Caliber Learning Center	Christelle	Boosie
						Forrest	Kay
						Golf	Kevin
						Logan	Peter
						Morgenstar	Karina
						Richter	Paige
						Wright	Michele
						Zuliani	Jose Maria
	2	Robert	Valentine	205	Laguna Street Campus	Blue	Harry
						Christelle	Boosie
						Crepier	Dolly
						Crow	Michael



B) rpt_StudentClasses:

The screenshot shows a report window titled "rpt_StudentClasses" with a table of data. The table has the following columns: FirstName, LastName, DoB, City, State, CourseDescription, and Section. The data is grouped by student, with each student's name and details appearing once, followed by their enrolled courses and sections.

FirstName	LastName	DoB	City	State	CourseDescription	Section
Boosie	Christelle	7/21/1972	San Francisco	CA	Advanced MS Access using MS Access	1
					Beginning MS Access	1
					Beginning MS Access	2
					Developing Applications using MS Access	1
Kay	Forrest	7/4/1957	Oakland	CA	Advanced MS Access using MS Access	1
					Beginning MS Access	1
Peter	Logan	1/8/1972	San Francisco	CA	Beginning MS Access	1
					Developing Applications using MS Access	1
Terra	Chorus	8/9/1949	Berkeley	CA	Advanced MS Access using MS Access	1
Michele	Wright	12/8/1955	Union City	CA	Beginning MS Access	1
Karina	Morgenstar	1/8/1970	Oakland	CA	Beginning MS Access	1
					Developing Applications using MS Access	1
Harry	Blue	3/10/1965	Fremong	CA	Advanced MS Access using MS Access	1
					Beginning MS Access	2
					Developing Applications using MS Access	1
Leslie	Green	3/25/1968	Berkeley	CA	Advanced MS Access using MS Access	1
					Beginning MS Access	2

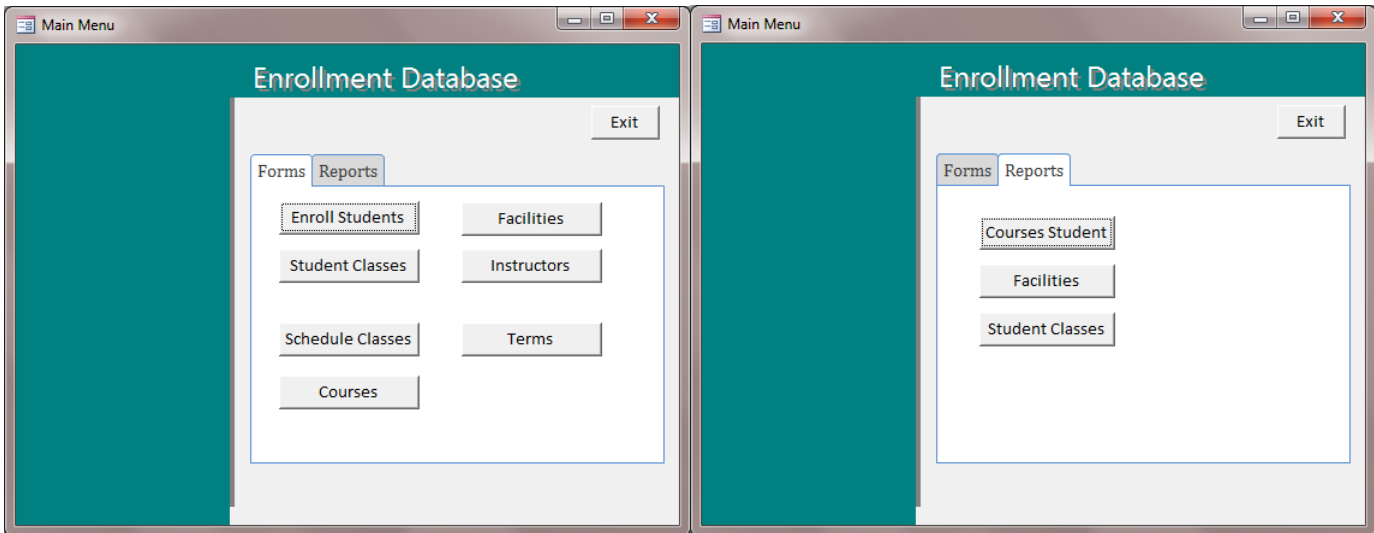
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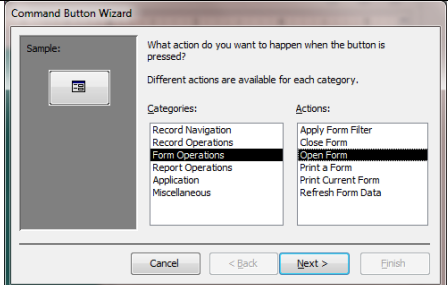
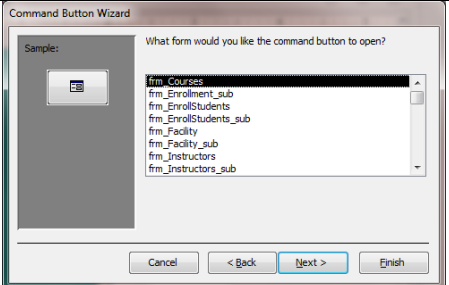
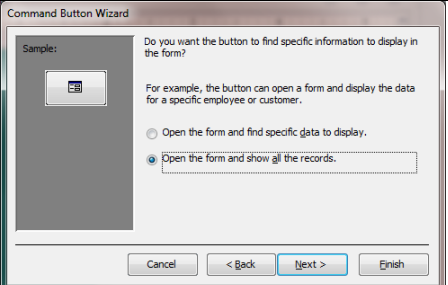
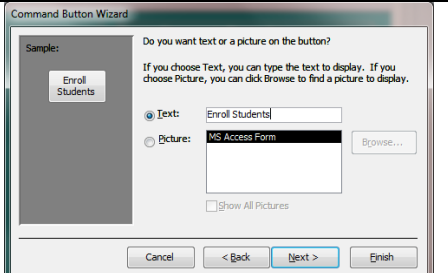
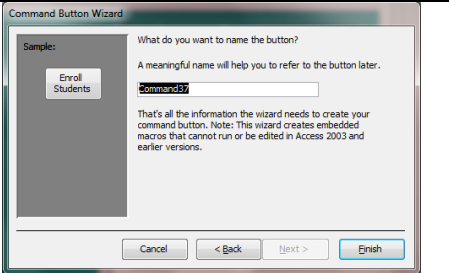


5. Step: Create the Menu System:

Use the form frm_MainMenu to build a navigation system. Open the form in design view. There is an empty tab control, your task is to add command buttons to open forms and run reports as shown below. Select the appropriate tab (either forms or reports) and use the command button control in the Controls group in the design tab and follow the steps of the wizard. Detailed instructions are below:



Instructions for adding form command buttons:

<p>1. Form Operations → Open Form</p> 	<p>2. Select appropriate form</p> 	<p>3. Open the form and show all records</p> 
<p>4. Type appropriate button caption</p> 	<p>5. Leave name as is</p> 	<p>6. Finish</p>

Instructions for adding report command buttons:

1. Report Operations → Preview Report
2. Select appropriate report
3. Type appropriate button caption
4. Finish