Database Design and Management Project Rubric (Pairs or Individual)

Criteria	Beginning	Developing	Accomplished	Exemplary	Total
		Database Design (Part	1)		
Database Project	6 points	7 points	8 points	9-10 points	/10
Proposal	Database project	Database project	Database project	Database project	
(revised version)	proposal is unclear	proposal includes a less	proposal includes an	proposal includes a clear	
	and/or the description	than clear or adequate	adequate high-level	high-level description of	
	of the application's	high-level description of	description of the	the application's general	
	general domain, data	the application's general	application's general	domain, data source to	
	source to populate the	domain, data source to	domain, data source	populate the database,	
	database, and how	populate the database,	to populate the	and how users will	
	users will interact with	and how users will	database, and how	interact with it. Includes	
	it is inadequate. Lacks	interact with it. Includes	users will interact with	all necessary entities and	
	logical entities and/or	logical entities and/or	it for the most part.	relationships (e.g., 7-10	
	relationships and/or	relationships and less	Includes essential	for pairs; 4-7 for	
	sufficient attributes and	than sufficient attributes	entities and	individuals) and all	
	constraints;	and constraints.	relationships and	attributes and	
	unsatisfactory inclusion	Incorporates few	sufficient attributes	constraints. Highly	
	of revisions based on	revisions based on	and constraints.	effective in incorporating	
	instructor's feedback.	instructor's feedback.	Incorporates most	all revisions based on	
			revisions based on	instructor's feedback.	
			instructor's feedback.		
E/R Diagram,	6 points	7 points	8 points	9-10 points	/10
Attributes and	Poorly designed E/R	Less than	Adequate and	Complete and	
Constraints	Diagram for project	complete/appropriate	somewhat appropriate	appropriate E/R Diagram	
(revised version)	database that lacks	E/R Diagram for project	E/R Diagram for	for project database with	
	logical entities and/or	database with somewhat	project database	logical entities and	
	relationships and/or	reasonable entities and	which includes mostly	relationships and specific	
	sufficient attributes and	relationships and/or less	reasonable entities	and accurate attributes	
	constraints;	than accurate attributes	and relationships and	and constraints (e.g., key	
	unsatisfactory inclusion	and/or constraints (e.g.,	accurate attributes	constraints). Highly	
	of revisions based on	key constraints).	and constraints (e.g.,	effective in incorporating	
	instructor's feedback.	Incorporates few	key constraints).	all revisions based on	
		revisions based on	Incorporates most	instructor's feedback.	
		instructor's feedback.	revisions based on		
			instructor's feedback.		
Use of Database	6 points	7 points	8 points	9-10 points	/10
Design Tool and	Inadequate use of	Somewhat reasonable	Satisfactory use of	Highly effective use of	
SQL Relational	MySQL Workbench to	use of MySQL	MySQL Workbench to	MySQL Workbench to	
Schema Design	create the conceptual	Workbench to create the	create the conceptual	create the conceptual	
(revised version)	design of the database;	conceptual design of the	design of the database	design of the database	
	and/or did not define	database and define data	and define data types	and define all data types	
	accurate data types and	types and characteristics,	and characteristics,	and characteristics,	
	characteristics, and/or	mapping minimal	mapping most	mapping all constraints	
	mapped unclear and/or	constraints and/or	constraints and/or	and/or dependencies	
	incomplete or missing	dependencies including	dependencies	with normalization to	
	normalization.	some degree of	including	BCNF. Incorporates all	
	Unsatisfactory inclusion	normalization to 3NF.	normalization to 3NF.	revisions based on	
	of revisions based on	Incorporates some	Incorporates most	instructor's feedback.	
	instructor's feedback.	revisions based on	revisions based on		
		instructor's feedback.	instructor's feedback.		

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Database Design and Management Project Rubric (continued)

Criteria	Beginning	Developing	Accomplished	Exemplary	Total
	Databas	se Creation and Managem	nent (Part 2)		
MySQL DBMS	6 points	7 points	8 points	9-10 points	/10
Tables and Data	Unsatisfactory use of	Less than adequate use	Satisfactory use of	Highly effective use of	
Loading	MySQL DBMS; and/or	of MySQL DBMS;	MySQL DBMS in	MySQL DBMS in	
(revised version)	implemented improper	implemented minimal	implementing	implementing project	
	or unclear project	appropriate project	essential project	relations, attributes and	
	relations, and/or	relations and/or	relations, and/or	constraints; loaded	
	attributes and/or	attributes and/or	attributes and/or	tables with accurate and	
	constraints; loaded	constraints; loaded	constraints; loaded	appropriate data. Made	
	tables with	tables with sometimes	tables with adequate	all suggested changes to	
	inappropriate or	improper data. Made	and appropriate data	the overall design and	
	illogical data. Made	some suggested changes	for the most part.	the SQL schema based on	
	incomplete or improper	to the overall design and	Made most suggested	instructor's feedback.	
	changes to the overall	the SQL schema based on	changes to the overall		
	design and the SQL	instructor's feedback.	design and the SQL		
	schema based on		schema based on		
	instructor's feedback.		instructor's feedback.		
Database Testing	6 points	7 points	8 points	9-10 points	/10
(revised version)	In adequate testing of	Minimal amount of	Demonstrated	Demonstrated superior	
	data resulting in poor	testing of data resulting	adequate data	data integrity through	
	data integrity with a	in less than adequate	integrity through	testing all data for	
	high degree of	data integrity and/or	testing data for	anomalies and modifying	
	anomalies and/or lacks	anomalies; limited	possible anomalies	the SQL schema as	
	enough modification of	modifications of the SQL	and modifying the SQL	appropriate.	
	the SQL schema.	schema, as needed.	schema for the most	Incorporates all revisions	
	Unsatisfactory inclusion	Incorporates some	part. Incorporates	based on instructor's	
	of revisions based on	revisions based on	most revisions based	feedback.	
	instructor's feedback.	instructor's feedback.	on instructor's		
			feedback.		
Use of Database	6 points	7 points	8 points	9-10 points	/10
Management	Unsatisfactory use of	Somewhat reasonable	Satisfactory use of	Highly effective use of	
Tool	MySQL (or other	use of MySQL (or other	MySQL (or other	MySQL (or other	
(revised version)	database management	database management	database	database management	
	tool) to create the	tool) to create the	management tool) to	tool) to create the	
	database and/or	database. Inserted 15-20	create the database.	database. Inserted 30 or	
	inserted less than 15	tuples of data somewhat	Inserted 20-30 tuples	more tuples of data	
	tuples of data and/or is	appropriate to the	of data appropriate to	appropriate to the	
	inappropriate to the	project. Created basic	the project. Created	project. Created all	
	project. Created	SQL tables in the SQL	essential SQL tables in	necessary SQL tables in	
	improper SQL tables in	schema on the SCILSNET	the SQL schema on	the SQL schema on the	
	the SQL schema on the	MySQL account,	the SCILSNET MySQL	SCILSNET MySQL	
	SCILSNET MySQL	including some	account, including	account, including all	
	account, including	constraints and/or	most constraints	constraints and adding	
	improper constraints	adding some additional	and/or adding	any additional attribute-	
	and/or lacking	attribute-based CHECK	additional attribute-	based CHECK constraints.	
	additional attribute-	constraints.	based CHECK		
	based CHECK		constraints.		
	constraints.				

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Database Design and Management Project Rubric (continued)

Criteria	Beginning	Developing	Accomplished	Exemplary	Total
Database Views		Database Integration (Pa		0.40	/4.0
and Queries	6 points	7 points	8 points	9-10 points	/10
(revised version)	Unsatisfactory use of SQL SELECT queries	Somewhat reasonable use of SQL SELECT	Satisfactory use of SQL SELECT queries with	Highly effective use of SQL SELECT queries with	
(1011000 10101011)	with joins to create less	queries with joins to	joins to create 10-15	joins to create 10-15 or	
	than adequate views of	create a minimal amount	complex views of	more complex views of	
	project database tables;	of complex views of	project database	project database tables	
	and/or completes 5 or	project database tables;	tables that for the	that all clearly match	
	fewer views; and/or	and/or completes less	most part match what	what users might query	
	views are inappropriate	than 10 views; and/or	users might query for.	for. Incorporates all	
	to project proposal	the views do not always	Incorporates most	revisions based on	
	deliverables.	match what users might	revisions based on	instructor's feedback.	
	Unsatisfactory inclusion	query for. Incorporates	instructor's feedback.		
	of revisions based on	some revisions based on			
	instructor's feedback.	instructor's feedback.			
Web Interface	6 points	7 points	8 points	9-10 points	/10
and Usability	Inadequate coding of	Less than adequate	Adequate coding of	Superior coding of HTML	
(revised version)	HTML forms and PHP to	coding of HTML forms	HTML forms and PHP	forms and PHP to	
	integrate the project	and PHP to integrate the	to integrate the	integrate the project	
	database on a web	project database on a	project database on a	database on a web page.	
	page. Presents an	web page. Presents a	web page. Presents a	Presents a clear and	
	improper and/or	sometimes improper	somewhat proper and	simple interface, which	
	incomplete interface, and/or which lacks	and/or complicated interface, and/or which	simple interface, which supports most	supports all intended project functionalities	
	support of the intended	supports a minimal	intended project	and database views and	
	project functionalities	amount of the intended	functionalities and/or	gueries with no SQL	
	and/or database views	project functionalities	database views and/or	commands visible to the	
	and/or queries with	and/or database views	queries and/or at	user. Incorporates all	
	more than two SQL	and/or queries with more	minimum only one	revisions based on	
	commands visible to	than one SQL commands	SQL command visible	instructor's feedback.	
	the user. Unsatisfactory	visible to the user.	to the user.		
	inclusion of revisions	Incorporates some	Incorporates most		
	based on instructor's	revisions based on	revisions based on		
	feedback.	instructor's feedback.	instructor's feedback.		
Presentation to	6 points	7 points	8 points	9-10 points	/10
Class	Pair/individual is	Pair/individual is	Pair/individual is	Oral presentation is	
	minimally effective in	somewhat effective in	effective in delivering	highly effective;	
	delivering the oral	delivering the oral	the oral presentation	pair/individual is	
	presentation;	presentation	demonstrating good	articulate and clear in	
	communication skills	demonstrating average	communication skills;	delivering their oral	
	are below	communication skills;	generally close to the	presentation	
	average/poor; substantially	slightly over/under the allotted time limit (10	time limit (10 mins. total); preparation is	demonstrating excellent communication skills in	
	over/under the time	mins. total; more	evident for the most	the allotted time (10	
	limit (10 mins.); lack of	preparation is needed.	part.	mins. total); preparation	
	preparation is evident.	preparation is incoded.	parti	is strongly evident.	
	P	Other Criteria	l .	67	
Database Project	6 points	7 points	8 points	9-10 points	/10
Reflection	Conveys inadequate	Conveys limited evidence	Conveys evidence of	Conveys strong evidence	
	evidence of reflection	of reflection on own	reflection on own	of reflection on own	
	on own work in	work in response to the	work in response to	work in response to the	
	response the self-	self-assessment	the self-assessment	self-assessment	
	assessment questions	questions posed; minimal	questions posed	questions posed	
	posed; and/or lacks	examples and/or	including examples	including examples and	
	examples and/or	personal insights.	and/or personal	strong insights. Well	
	personal insights. Poor	Average and/or casual	insights. Above	written and clear using	
	writing style lacking in	writing style that is	average writing style	standard English,	
	standard English,	sometimes unclear	and mostly clear using	characterized by	
	clarity, language used,	and/or with some errors	standard English with	elements of a strong	
	and/or errors in	in grammar, punctuation,	little grammar,	writing style and basically	
	grammar, punctuation,	usage, and spelling.	punctuation, usage,	free from grammar,	
	usage, and spelling.		and spelling errors.	punctuation, usage, and spelling errors.	
			TOTAL POL		/100
TOTAL POINTS (sum of 10 Criteria)					

Note: Students (pairs or individuals) who fail to meet "Beginning" criteria (in given criteria or the overall project) may be graded lower than the possible points for a Beginning level and/or subject to a failing grade.

Rubric by Prof. Mary Mallery and Denise Kreiger, SC&I, Rutgers University, 1/14