

Name: Mai ABD ELTWAB

2. Tables

Question type

<u>ID</u>	type
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Question

<u>ID</u>	question	answer ID	type ID
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Note: answer for true or false questions => 0 OR 1, For multi-choices => choice ID

Choices

<u>ID</u>	answer	question ID
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Course

<u>ID</u>	Name	Description	Max degree	Min degree
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Question Pool

<u>Question ID</u>	<u>Course ID</u>
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Instructor

<u>ID</u>	First Name	Last Name
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Class

<u>ID</u>	Code	Year
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Class Course

<u>ID</u>	Course ID	Instructor ID	Class ID
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Note: this is a ternary relationship

Student

<u>ID</u>	First Name	Last Name	Class ID
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Exam

ID	year	Total time	Start at	End at	degree	state
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Exam Questions

<u>Exam ID</u>	<u>Question ID</u>	degree
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Student Exam

<u>ID</u>	Student ID	Exam ID	Degree
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Student answers

<u>Student Exam ID</u>	<u>Question ID</u>	Answer
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DB objects:

Name	Type	Do
InstructorCourses	VIEW	get instructor courses
CourseQuestions	VIEW	get questions for course (question pool)
CourseExam	VIEW	get course exam question
AnswerList	TYPE	Insert list of choices
QuestionList	TYPE	Insert list of questions
StudentAnswerList	TYPE	Insert list of students
IsCourseInstructor	FUNCTION	check if an instructor teaches the given course or not
GetCourseQuestions	FUNCTION	get questions of specific course
AddTime	FUNCTION	add time ('hh:mm') for datetime
GetExamQuestions	FUNCTION	get questions of specific exam
GetQuestionsChoices	FUNCTION	get question choices
AddTrueFalseQues	PROC	Add true or false question in course question pool ==> used by teacher (when he chooses a specific course)
AddMultiChoiceQues	PROC	Add multi-choice question in course question pool --> used by teacher (when he chooses a specific course) --> Choices passed to procedure as table of type AnswerList
DeleteQuestion	PROC	Delete question in course question pool
UpdateTrueFalseQues	PROC	update question in course question pool (true or false type)
UpdateMultiChoiceQues	PROC	update question in course question pool (multi-choice type)
AutoGenerateExam	PROC	generate auto exam
AddExam	PROC	add exam manually
AssignClassExam	PROC	assign exam to class

StudentExamAnswer	PROC	Submit Student answer
CheckAnswer	PROC	CHECK STUDENT ANSWER FOR SPECIFIC QUESTION
ExamCorrection	TRIGGER	set exam result
ExamResult	PROC	Calculate exam result for student