Generated using <u>SQL Data Dictionary</u> demo version.

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SQL_Project

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Tables:

Table dbo.Choices (101 rows)

	Column	Data Type	Identity	Nullable	Default
PK, FK	Q_id	int			
PK	op1	varchar(50)			
	Num	varchar(50)		Χ	

Indexes:

PK_Choices (Primary Key) (Clustered) (0.99% Selectivity)

Q_id op1

References:

dbo.Question (Q_id)

Used by:

Procedure dbo.get_questions

Num op1 Q_id

Procedure dbo.Question_Data

Num op1 Q_id

Table dbo.Clients (4 rows)

	Column	Data Type	Identity	Nullable	Default
PK	U_Name	varchar(50)			
	U_Pass	varchar(50)			
	U_Role	varchar(50)			

Indexes:

PK_Users (Primary Key) (Clustered) (25% Selectivity)

U_Name

Referenced by:

 $\textbf{dbo.Instructor}~(\textit{Ins_U_N} \rightarrow \textit{U_Name})$

dbo.Student (St_U_N -> U_Name)

Used by:

Procedure dbo.change_password

U_Name U_Pass

Procedure dbo.Check_user

U_Name

 U_Pass

U_Role

Procedure dbo.ins_user

U_Name

Procedure dbo.insert_inst

U_Name

Procedure dbo.insert_student

U_Name

Table dbo.Course (3 rows)

	Column	Data Type	Identity	Nullable	Default
PK	Crs_id	int			
	Crs_name	varchar(50)			
	Crs_duration	int		Χ	

Indexes:

PK_Course (Primary Key) (Clustered) (33.33% Selectivity)

Crs_id

Referenced by:

dbo.Exam (Crs_id)

dbo.Question (Crs_id)

dbo.Std_Crs_Ins (Crs_id)

dbo.Topic (Crs_id)

Used by:

Procedure dbo.del_course

Crs_id

Procedure dbo.Generate_Exam

Crs_id Crs_name

Procedure dbo.ins_course

Crs_id

Procedure dbo.ins_crs_stud

Crs_id Crs_name

Procedure dbo.ins_exam

 Crs_id

Procedure dbo.ins_topic

Crs_id

Procedure dbo.stud_grade

Crs_id

Crs_name

Procedure dbo.update_course

Crs_duration Crs_id Crs_name

Procedure dbo.update_topic

Crs_id

Table dbo.Department (6 rows)

	Column	Data Type	Identity	Nullable	Default
PK	Dept_id	int			
	Dept_name	varchar(50)			
FK	Mang_id	int		Χ	

Indexes:

PK_Department (Primary Key) (Clustered) (16.67% Selectivity)

Dept_id

References:

dbo.Instructor (Mang_id -> Ins_id)

Referenced by:

dbo.Instructor (Dept_id)

dbo.Student (Dept_id)

Used by:

Procedure dbo.del_dept

Dept_id

Procedure dbo.ins_dept

Dept_id

Procedure dbo.insert_inst

Dept_id

Procedure dbo.insert_student

 $\mathsf{Dept_id}$

Procedure dbo.update_dept

Dept_id Dept_name Mang_id

Procedure dbo.update_inst

Dept_id

Procedure dbo.update_std

Dept_id

Table dbo.Exam (3 rows)

	Column	Data Type	Identity	Nullable	Default
PK	Ex_id	int			
	Ex_duration	int		Х	
FK	Crs_id	int			

Indexes:

PK_Exam (Primary Key) (Clustered) (33.33% Selectivity)

Ex_id

References:

dbo.Course (Crs_id)

Referenced by:

dbo.Exam_Ques (Ex_id)

 $\mathbf{dbo.Std_Ex_Ques}\;(\mathit{Ex_id})$

Used by:

Procedure dbo.exam_correction

Crs_id Ex_id

Procedure dbo.Generate_Exam

Ex_id

Table dbo.Exam_Ques (21 rows)

	Column	Data Type	Identity	Nullable	Default
PK, FK	Ex_id	int			
PK, FK	Q_id	int			

Indexes:

PK_Exam_Ques (Primary Key) (Clustered) (4.76% Selectivity)

Ex_id Q_id

References:

dbo.Exam (Ex_id)

dbo.Question (Q_id)

Used by:

Procedure dbo.del_ques

Q_id

Procedure dbo.Ex_Q

Ex_id Q_id

Procedure dbo.Exam_Ans

 Ex_id

Q_id

Procedure dbo.Generate_Exam

Ex_id

Procedure dbo.get_questions

Ex_id Q_id

Table dbo.Instructor (18 rows)

	Column	Data Type	Identity	Nullable	Default
PK	Ins_id	int			
	Ins_name	varchar(50)			
	Ins_salary	int		X	
FK	Dept_id	int			
FK	Ins_U_N	varchar(50)		Х	

Indexes:

PK_Instructor (Primary Key) (Clustered) (5.56% Selectivity)

Ins_id

References:

dbo.Clients (Ins_U_N -> U_Name)

dbo.Department (Dept_id)

Referenced by:

dbo.Department (Mang_id -> Ins_id)

dbo.Std_Crs_Ins (Ins_id)

Used by:

Procedure dbo.Check_user

Ins_id Ins_name Ins_U_N

Procedure dbo.del_dept

Dept_id Ins_id

Procedure dbo.del_inst

Ins_id

Procedure dbo.ins_dept

Ins_id

Procedure dbo.insert_inst

Ins_id

Procedure dbo.update_dept

Ins_id

Procedure dbo.update_inst

Dept_id Ins_id Ins_name Ins_salary

Table dbo.Question (40 rows)

	Column	Data Type	Identity	Nullable	Default
PK	Q_id	int			
	Q_type	varchar(50)			
	Q_body	varchar(max)			
	Q_mans	varchar(50)			
FK	Crs_id	int			
	Q_grade	int			

Indexes:

PK_Question (Primary Key) (Clustered) (2.5% Selectivity)

Q_id

References:

dbo.Course (Crs_id)

Referenced by:

dbo.Choices (Q_id)

dbo.Exam_Ques (Q_id)

 ${\bf dbo.Std_Ex_Ques}\;(Q_id)$

Used by:

Procedure dbo.del_ques

Q_id

Procedure dbo.Ex_Q

Q_body

Q_id

Q_type

Procedure dbo.Ex_Std_1

 Q_body

Q_id

Q_type

Procedure dbo.exam_correction

 Q_id

Q_mans

Procedure dbo.Generate_Exam

Crs_id

Q_id

Q_type

Procedure dbo.get_questions

 Q_body

Q_id

Procedure dbo.Question_Data

Crs_id Q_body Q_grade Q_id

Table dbo.Std_Crs_Ins (4 rows)

	Column	Data Type	Identity	Nullable	Default
PK, FK	St_id	int			
PK, FK	Crs_id	int			
PK, FK	Ins_id	int			
	grad	int		Χ	

Indexes:

PK_Std_Crs_Ins (Primary Key) (Clustered) (25% Selectivity)

St_id Crs_id Ins_id

References:

dbo.Course (Crs_id)
dbo.Instructor (Ins_id)
dbo.Student (St_id)

Used by:

Procedure dbo.del_course

Crs_id

Procedure dbo.del_inst

Ins id

Procedure dbo.exam_correction

Crs_id grad St_id

Procedure dbo.ins_crs_stud

Crs_id Ins_id St_id

Procedure dbo.stud_grade

Crs_id grad St_id

Table dbo.Std_Ex_Ques (11 rows)

	Column	Data Type	Identity	Nullable	Default
PK, FK	St_id	int			
PK, FK	Ex_id	int			

PK, FK	Q_id	int		
	St_ans	varchar(50)	Χ	
	Ex_date	date	Χ	getdate()

Indexes:

PK_Std_Ex_Ques (Primary Key) (Clustered) (9.09% Selectivity)

St_id Ex_id Q_id

References:

dbo.Exam (Ex_id)

dbo.Question (Q_id)

dbo.Student (St_id)

Used by:

Procedure dbo.del_ques

Q_id

Procedure dbo.Ex_Std_1

Ex_id Q_id St_ans St_id

Procedure dbo.Exam_Ans

Ex_id Q_id St_ans St_id

Procedure dbo.exam_correction

Ex_id Q_id St_ans

Table dbo.Student (24 rows)

	Column	Data Type	Identity	Nullable	Default
PK	St_id	int			
	St_name	varchar(50)			
	St_age	int		X	
FK	Dept_id	int			
FK	St_U_N	varchar(50)		Χ	

Indexes:

PK_Student (Primary Key) (Clustered) (4.17% Selectivity)

St_id

References:

dbo.Clients (St_U_N -> U_Name)

dbo.Department (Dept_id)

Referenced by:

Used by:

Procedure dbo.Check_user

St_id St_name St U N

Procedure dbo.del_dept

Dept_id St_id

Procedure dbo.del_student

St_id

Procedure dbo.Exam_Ans

St_id St_name

Procedure dbo.exam_correction

St_id St_name

Procedure dbo.insert_student

St_id

Procedure dbo.stud_dept

Dept_id St_age St_id St_name

Procedure dbo.update_std

Dept_id St_age St_id St_name

Table dbo.Topic (3 rows)

	Column	Data Type	Identity	Nullable	Default
PK	Top_id	int			
	Top_name	varchar(50)			
FK	Crs_id	int			

Indexes:

PK_Topic (Primary Key) (Clustered) (33.33% Selectivity)

Top_id

References:

dbo.Course (Crs_id)

Used by:

Procedure dbo.Crs_id_topic

Crs_id Top_id Top_name

Procedure dbo.del_topic

Top_id

Procedure dbo.ins_topic

Top_id

Procedure dbo.update_topic

Crs_id Top_id Top_name

Procedures:

Procedure dbo.change_password

Parameter	Data Type	Default	Is Output
@UName	varchar(50)		
@OldPass	varchar(50)		
@NewPass	varchar(50)		

Uses:

Table dbo.Clients

U_Name U_Pass

Procedure dbo.Check_user

Parameter	Data Type	Default	Is Output
@User_Name	varchar(50)		
@Password	varchar(50)		

Result:

Column	Data Type	Nullable
St_id	int	
(No column name)	varchar(50)	Х
St_name	varchar(50)	

Uses:

Table dbo.Clients

U_Name U_Pass U_Role

Table dbo.Instructor

Ins_id Ins_name Ins_U_N

Table dbo.Student

St_id St_name St_U_N

Procedure dbo.Crs_id_topic

Parameter	Data Type	Default	Is Output
@Crs_id	int		

Result:

Column	Data Type	Nullable
Top_id	int	
Top_name	varchar(50)	

Table dbo.Topic

Crs_id Top_id Top_name

Procedure dbo.del_course

Parameter	Data Type	Default	Is Output
@Crs_id	int		

Uses:

Table dbo.Course

Crs_id

Table dbo.Std_Crs_Ins

Crs_id

Procedure dbo.del_dept

Parameter	Data Type	Default	Is Output
@Dept_id	int		

Uses:

Table dbo.Department

Dept_id

Table dbo.Instructor

Dept_id Ins_id

Table dbo.Student

Dept_id St_id

Procedure dbo.del_inst

	Parameter	Data Type	Default	Is Output
@Ins_id		int		

Uses:

Table dbo.Instructor

Ins_id

Table dbo.Std_Crs_Ins

Ins_id

Procedure dbo.del_ques

Darameter	Data Type	Dofault	To Output

@Q_id	int		

Table dbo.Exam_Ques

Q_id

Table dbo.Question

Q_id

Table dbo.Std_Ex_Ques

Q_id

Procedure dbo.del student

Parameter	Data Type	Default	Is Output
@St_id	int		

Uses:

Table dbo.Student

St_id

Procedure dbo.del_topic

Parameter	Data Type	Default	Is Output
@Top_id	int		

Uses:

Table dbo.Topic

Top_id

Procedure dbo.Ex_Q

Parameter	Data Type	Default	Is Output
@Ex_id	int		

Result:

Column	Data Type	Nullable
Q_id	int	
Q_body	varchar(max)	
Q_type	varchar(50)	

Uses:

Table dbo.Exam_Ques

Ex_id Q_id

Table dbo.Question

Q_body Q_id

Procedure dbo.Ex_Std_1

Parameter	Data Type	Default	Is Output
@Ex_id	int		
@Std_id	int		

Result:

Column	Data Type	Nullable
Q_id	int	
Q_body	varchar(max)	
Q_type	varchar(50)	
St_ans	varchar(50)	X

Uses:

Table dbo.Question

Q_body Q_id Q_type

Table dbo.Std_Ex_Ques

Ex_id Q_id St_ans St_id

Procedure dbo.Exam Ans

Parameter	Data Type	Default	Is Output
@St_name	varchar(50)		
@Ex_id	int		
@ans1	varchar(50)		
@ans2	varchar(50)		
@ans3	varchar(50)		
@ans4	varchar(50)		
@ans5	varchar(50)		
@ans6	varchar(50)		
@ans7	varchar(50)		
@ans8	varchar(50)		
@ans9	varchar(50)		
@ans10	varchar(50)		

Uses:

Table dbo.Exam_Ques

Ex_id Q_id

Table dbo.Std_Ex_Ques

Ex_id Q_id St_ans St_id

Table dbo.Student

St_id St_name

Procedure dbo.exam_correction

Parameter	Data Type	Default	Is Output
@St_name	varchar(50)		
@Ex_id	int		

Uses:

Table dbo.Exam

Crs_id Ex_id

Table dbo.Question

Q_id Q_mans

Table dbo.Std_Crs_Ins

Crs_id grad St_id

Table dbo.Std_Ex_Ques

Ex_id Q_id St_ans

Table dbo.Student

St_id St_name

Procedure dbo.Generate_Exam

Parameter	Data Type	Default	Is Output
@Crs_Name	varchar(50)		
@MSQ	int		
@TF	int		
@Ex_id	int		
@Ex_duration	int		

Uses:

Table dbo.Course

Crs_id Crs_name

Table dbo.Exam

Ex_id

Table dbo.Exam_Ques

 Ex_id

Table dbo.Question

Crs_id Q_id Q_type

Procedure dbo.get_questions

Parameter	Data Type	Default	Is Output
@Ex_id	int		

Result:

Column	Data Type	Nullable
Q_body	varchar(max)	
a	varchar(50)	Х
b	varchar(50)	Х
С	varchar(50)	Х

Uses:

Table dbo.Choices

Num op1 Q_id

Table dbo.Exam_Ques

Ex_id Q_id

Table dbo.Question

Q_body Q_id

Procedure dbo.ins_course

Parameter	Data Type	Default	Is Output
@Crs_id	int		
@Crs_name	varchar(50)		
@Crs_duration	int		

Uses:

Table dbo.Course

Crs_id

Procedure dbo.ins_crs_stud

	Parameter	Data Type	Default	Is Output
@	Ins_id	int		

Result:

Column	Data Type	Nullable
Crs_name	varchar(50)	
number of students per course	int	X

Table dbo.Course

Crs_id Crs_name

Table dbo.Std_Crs_Ins

Crs_id Ins_id St id

Procedure dbo.ins_dept

Parameter	Data Type	Default	Is Output
@Dept_id	int		
@Dept_name	varchar(50)		
@Mang_id	int		

Uses:

Table dbo.Department

Dept_id

Table dbo.Instructor

Ins_id

Procedure dbo.ins_exam

Parameter	Data Type	Default	Is Output
@Ex_id	int		
@Ex_duration	int		
@Crs_id	int		

Uses:

Table dbo.Course

Crs_id

Procedure dbo.ins_topic

Parameter	Data Type	Default	Is Output
@Top_id	int		
@Top_name	varchar(50)		
@Crs_id	int		

Uses:

Table dbo.Course

Crs_id

Table dbo.Topic

Top_id

Procedure dbo.ins_user

Parameter	Data Type	Default	Is Output
@U_Name	varchar(50)		
@U_Pass	varchar(50)		
@U_Role	varchar(50)		

Table dbo.Clients

U_Name

Procedure dbo.insert_inst

Parameter	Data Type	Default	Is Output
@Ins_id	int		
@Ins_name	varchar(50)		
@Ins_salary	int		
@Dept_id	int		
@Ins_U_N	varchar(50)		

Uses:

Table dbo.Clients

U_Name

Table dbo.Department

Dept_id

Table dbo.Instructor

Ins_id

Procedure dbo.insert_student

Parameter	Data Type	Default	Is Output
@St_id	int		
@St_name	varchar(50)		
@St_age	int		
@Dept_id	int		
@St_U_N	varchar(50)		

Uses:

Table dbo.Clients

U_Name

Table dbo.Department

Dept_id

Table dbo.Student

St_id

Procedure dbo.Question_Data

Parameter	Data Type	Default	Is Output
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@Crs_id	int		
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Result:

Column	Data Type	Nullable
Q_id	int	
Q_body	varchar(max)	
Q_grade	int	
а	varchar(50)	Χ
b	varchar(50)	Х
С	varchar(50)	Х

Uses:

Table dbo.Choices

Num op1 Q_id

Table dbo.Question

Crs_id Q_body Q_grade Q_id

Procedure dbo.stud_dept

Parameter	Data Type	Default	Is Output
@Dept_id	int		

Result:

Column	Data Type	Nullable
St_id	int	
St_name	varchar(50)	
St_age	int	X

Uses:

Table dbo.Student

Dept_id St_age St_id St_name

Procedure dbo.stud_grade

	Parameter	Data Type	Default	Is Output
@St id		int		

Result:

Column	Data Type	Nullable
student's grade	int	Х
Crs name	varchar(50)	

Table dbo.Course

Crs_id Crs_name

Table dbo.Std_Crs_Ins

Crs_id grad St id

Procedure dbo.update_course

Parameter	Data Type	Default	Is Output
@Crs_id	int		
@Crs_name	varchar(50)		
@Crs_duration	int		

Uses:

Table dbo.Course

Crs_duration Crs_id Crs_name

Procedure dbo.update_dept

Parameter	Data Type	Default	Is Output
@Dept_id	int		
@Dept_name	varchar(50)		
@Mang_id	int		

Uses:

Table dbo.Department

Dept_id Dept_name Mang_id

Table dbo.Instructor

Ins_id

Procedure dbo.update_inst

Parameter	Data Type	Default	Is Output
@Ins_id	int		
@Ins_name	varchar(50)		
@Ins_salary	int		
@Dept_id	int		

Uses:

Table dbo.Department

Dept_id

Table dbo.Instructor

Dept_id Ins_id Ins_name Ins_salary

Procedure dbo.update_std

Parameter	Data Type	Default	Is Output
@St_id	int		
@St_name	varchar(50)		
@St_age	int		
@Dept_id	int		

Uses:

Table dbo.Department

Dept_id

Table dbo.Student

Dept_id St_age St_id St_name

Procedure dbo.update_topic

Parameter	Data Type	Default	Is Output
@Top_id	int		
@Crs_id	int		
@Top_name	varchar(50)		

Uses:

Table dbo.Course

Crs_id

Table dbo.Topic

Crs_id Top_id Top_name