Online Examination System

It is a database used by educational institutions to manage and track their exams, which is known as the Exam Management System .

In the database, information on exams is stored, including information about the exam's name, when it was given, who took it,

Table of Contents

▤ *(local)*

Databases (1)

- 🗄 Exam-System

Server Properties

Property	Value
Product	Microsoft SQL Server
Version	14.0.2047.8
Language	English (United States)
Platform	NT x64
Edition	Developer Edition (64-bit)
Engine Edition	3 (Enterprise)
Processors	4
OS Version	6.3 (19044)
Physical Memory	3967
Is Clustered	False
Root Directory	C:\Program Files\Microsoft SQL Server\MSSQL14.MSSQLSERVER\MSSQL
Collation	SQL_Latin1_General_CP1_CI_AS

Server Settings

Property	Value
Default data file path	C:\Program Files\Microsoft SQL Server\MSSQL14.MSSQLSERVER\MSSQL\DATA\
Default backup file path	C:\Program Files\Microsoft SQL Server\MSSQL14.MSSQLSERVER\MSSQL\Backup
Default log file path	C:\Program Files\Microsoft SQL Server\MSSQL14.MSSQLSERVER\MSSQL\DATA\
Recovery Interval (minutes)	0
Default index fill factor	0
Default backup media retention	0
Compress Backup	False

Advanced Server Settings

Property	Value
Locks	0
Nested triggers enabled	True
Allow triggers to fire others	True
Default language	English

Network packet size	4096
Default fulltext language LCID	1033
Two-digit year cutoff	2049
Remote login timeout	10
Cursor threshold	-1
Max text replication size	65536
Parallelism cost threshold	5
Max degree of parallelism	0
Min server memory	16
Max server memory	2147483647
Scan for startup procs	False
Transform noise words	False
CLR enabled	False
Blocked process threshold	0
Filestream access level	False
Optimize for ad hoc workloads	False
CLR strict security	True

🗀 User databases

Databases (1)

- 🗄 Exam-System

▤ Exam-System Database

Files

Name	Type	Size	Maxsize	Autogrowth	File Name
Exam-System	Data	8.00 MB	unlimited	64.00 MB	C:\Program Files\Microsoft SQL Server\MSSQL14.MSSQLSERVER\MSSQL\DATA\Exam-System.mdf
Exam-System_log	Log	72.00 MB	2048.00 GB	64.00 MB	C:\Program Files\Microsoft SQL Server\MSSQL14.MSSQLSERVER\MSSQL\DATA\Exam-System_log.ldf

▦ *Tables*

Objects

Name
dbo.Choices
dbo.Course
dbo.Courses_Questions
dbo.Department
dbo.Exam
dbo.ExamAnswer
dbo.ExamQuestion
dbo.Instructors
dbo.Questions
dbo.Student
dbo.Student_Courses
dbo.Topics

🖽 [dbo].[Choices]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	76
Created	1:57:22 PM Monday, February 20, 2023
Last Modified	7:25:26 PM Monday, February 20, 2023

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability
PK DFK C	Q_ID	int	4	NOT NULL
PK C	Q_Choice	varchar(200)	200	NOT NULL

Indexes

Key	Name	Key Columns	Unique
PK C	Q	Q_ID, Q_Choice	True

Foreign Keys

Name	Columns
FK_Choice_Questions	Q_ID->[dbo].[Questions].[Q_ID]

SQL Script

```
CREATE TABLE [dbo].[Choices]
(
[Q_ID] [int] NOT NULL,
[Q_Choice] [varchar] (200) COLLATE SQL_Latin1_General_CP1_CI_AS NOT NULL
) ON [PRIMARY]
GO
ALTER TABLE [dbo].[Choices] ADD CONSTRAINT [Q] PRIMARY KEY CLUSTERED ([Q_ID], [Q_Choice]) ON
[PRIMARY]
GO
ALTER TABLE [dbo].[Choices] ADD CONSTRAINT [FK_Choice_Questions] FOREIGN KEY ([Q_ID]) REFERENCES
[dbo].[Questions] ([Q_ID])
GO
```

Uses

[dbo].[Questions]

Used By

[dbo].[getExamQuestions]

[dbo].[Course]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	5
Created	3:26:54 PM Sunday, February 19, 2023
Last Modified	9:10:55 PM Sunday, February 19, 2023

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability
PK C	Crs_Id	int	4	NOT NULL
	Crs_Name	nchar(30)	60	NOT NULL
	Crs_Description	nchar(50)	100	NULL allowed
FK	Ins_Id	int	4	NOT NULL

Indexes

Key	Name	Key Columns	Unique
PK C	PK_Course	Crs_Id	True

Foreign Keys

Name	Columns
FK_Course_Instructors	Ins_Id->[dbo].[Instructors].[ins_id]

SQL Script

```
CREATE TABLE [dbo].[Course]
(
[Crs_Id] [int] NOT NULL,
[Crs_Name] [nchar] (30) COLLATE SQL_Latin1_General_CP1_CI_AS NOT NULL,
[Crs_Description] [nchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
[Ins_Id] [int] NOT NULL
) ON [PRIMARY]
GO
ALTER TABLE [dbo].[Course] ADD CONSTRAINT [PK_Course] PRIMARY KEY CLUSTERED ([Crs_Id]) ON
[PRIMARY]
GO
```

```
ALTER TABLE [dbo].[Course] ADD CONSTRAINT [FK_Course_Instructors] FOREIGN KEY ([Ins_Id])
REFERENCES [dbo].[Instructors] ([ins_id])
GO
```

Uses

[dbo].[Instructors]

Used By

[dbo].[Courses_Questions]
[dbo].[Student_Courses]
[dbo].[Topics]
[dbo].[Deletecourse]
[dbo].[get_course_Topics]
[dbo].[getExamGrade]
[dbo].[getInsCrs]
[dbo].[insertCourse]
[dbo].[SelectCourseById]
[dbo].[Updatecourse]

🖼 [dbo].[Courses_Questions]

Properties

Property	Value
Row Count (~)	76
Created	3:34:15 PM Sunday, February 19, 2023
Last Modified	3:42:17 PM Sunday, February 19, 2023

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability
PK FK	Crs_ID	int	4	NOT NULL
PK FK	Q_ID	int	4	NOT NULL

Indexes

Key	Name	Key Columns	Unique
PK	PK__Courses___A985668750BF9DE6	Crs_ID, Q_ID	True

Foreign Keys

Name	Columns
FK_Courses_Questions_Course	Crs_ID->[dbo].[Course].[Crs_Id]
FK_Courses_Questions_Questions	Q_ID->[dbo].[Questions].[Q_ID]

SQL Script

```
CREATE TABLE [dbo].[Courses_Questions]
(
[Crs_ID] [int] NOT NULL,
[Q_ID] [int] NOT NULL
) ON [PRIMARY]
GO
ALTER TABLE [dbo].[Courses_Questions] ADD CONSTRAINT [PK__Courses___A985668750BF9DE6] PRIMARY KEY
CLUSTERED ([Crs_ID], [Q_ID]) ON [PRIMARY]
GO
ALTER TABLE [dbo].[Courses_Questions] ADD CONSTRAINT [FK_Courses_Questions_Course] FOREIGN KEY
([Crs_ID]) REFERENCES [dbo].[Course] ([Crs_Id])
GO
ALTER TABLE [dbo].[Courses_Questions] ADD CONSTRAINT [FK_Courses_Questions_Questions] FOREIGN KEY
([Q_ID]) REFERENCES [dbo].[Questions] ([Q_ID])
```

```
GO
```

Uses

[dbo].[Course]
[dbo].[Questions]

Used By

[dbo].[Distribute_Exam]

▦ [dbo].[Department]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	7
Created	3:23:48 PM Sunday, February 19, 2023
Last Modified	3:46:21 PM Sunday, February 19, 2023

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Identity	Default
PK c	Dept_ID	int	4	NOT NULL	10 - 10	
⬡	Dept_Name	nvarchar(50)	100	NULL allowed		
	Dept_Location	nvarchar(100)	200	NULL allowed		
	Mgr_HireDate	date	3	NULL allowed		(getdate())
FK	Ins_ID	int	4	NULL allowed		

Indexes

Key	Name	Key Columns	Unique
PK c	PK__Departme__72ABC12CD14A4837	Dept_ID	True
	c1	Dept_Name	True

Foreign Keys

Name	Columns
FK_Department_Instructors	Ins_ID->[dbo].[Instructors].[ins_id]

SQL Script

```
CREATE TABLE [dbo].[Department]
(
[Dept_ID] [int] NOT NULL IDENTITY(10, 10),
[Dept_Name] [nvarchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
[Dept_Location] [nvarchar] (100) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
[Mgr_HireDate] [date] NULL CONSTRAINT [DF__Departmen__Mgr_H__5DCAEF64] DEFAULT (getdate()),
[Ins_ID] [int] NULL
) ON [PRIMARY]
```

```
GO
ALTER TABLE [dbo].[Department] ADD CONSTRAINT [PK__Departme__72ABC12CD14A4837] PRIMARY KEY
CLUSTERED ([Dept_ID]) ON [PRIMARY]
GO
ALTER TABLE [dbo].[Department] ADD CONSTRAINT [c1] UNIQUE NONCLUSTERED ([Dept_Name]) ON [PRIMARY]
GO
ALTER TABLE [dbo].[Department] ADD CONSTRAINT [FK_Department_Instructors] FOREIGN KEY ([Ins_ID])
REFERENCES [dbo].[Instructors] ([ins_id])
GO
```

Uses

[dbo].[Instructors]

Used By

[dbo].[Student]
[dbo].[deleteDepartment]
[dbo].[GetStudentsByID]
[dbo].[insertDepartment]
[dbo].[selectDepartment]
[dbo].[updateDepartment]

🖼️ [dbo].[Exam]

Properties

Property	Value
Row Count (~)	1
Created	9:52:48 PM Tuesday, February 21, 2023
Last Modified	9:54:39 PM Tuesday, February 21, 2023

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Identity
PK C	Exam_id	int	4	NOT NULL	1 - 1
	ExamDate	date	3	NOT NULL	
	ExamTime	time	5	NOT NULL	

Indexes

Key	Name	Key Columns	Unique
PK C	Exam_pk	Exam_id	True

SQL Script

```sql
CREATE TABLE [dbo].[Exam]
(
[Exam_id] [int] NOT NULL IDENTITY(1, 1),
[ExamDate] [date] NOT NULL,
[ExamTime] [time] NOT NULL
) ON [PRIMARY]
GO
ALTER TABLE [dbo].[Exam] ADD CONSTRAINT [Exam_pk] PRIMARY KEY CLUSTERED ([Exam_id]) ON [PRIMARY]
GO
```

Used By

[dbo].[ExamAnswer]
[dbo].[ExamQuestion]
[dbo].[Generate_Exam]

▦ [dbo].[ExamAnswer]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	40
Created	9:52:50 PM Tuesday, February 21, 2023
Last Modified	9:54:39 PM Tuesday, February 21, 2023

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability
PK FK C	Std_id	int	4	NOT NULL
PK FK C	Exam_id	int	4	NOT NULL
PK FK C	Q_id	int	4	NOT NULL
	St_Answer	varchar(5)	5	NULL allowed

Indexes

Key	Name	Key Columns	Unique
PK C	ExamAnswer_pk	Exam_id, Q_id, Std_id	True

Foreign Keys

Name	Columns
FK_ExamAnswer_Exam	Exam_id->[dbo].[Exam].[Exam_id]
FK_ExamAnswer_Questions	Q_id->[dbo].[Questions].[Q_ID]
FK_ExamAnswer_Student	Std_id->[dbo].[Student].[Std_ID]

SQL Script

```
CREATE TABLE [dbo].[ExamAnswer]
(
[Std_id] [int] NOT NULL,
[Exam_id] [int] NOT NULL,
[Q_id] [int] NOT NULL,
[St_Answer] [varchar] (5) COLLATE SQL_Latin1_General_CP1_CI_AS NULL
) ON [PRIMARY]
GO
```

```sql
ALTER TABLE [dbo].[ExamAnswer] ADD CONSTRAINT [ExamAnswer_pk] PRIMARY KEY CLUSTERED ([Exam_id],
[Q_id], [Std_id]) ON [PRIMARY]
GO
ALTER TABLE [dbo].[ExamAnswer] ADD CONSTRAINT [FK_ExamAnswer_Exam] FOREIGN KEY ([Exam_id])
REFERENCES [dbo].[Exam] ([Exam_id])
GO
ALTER TABLE [dbo].[ExamAnswer] ADD CONSTRAINT [FK_ExamAnswer_Questions] FOREIGN KEY ([Q_id])
REFERENCES [dbo].[Questions] ([Q_ID])
GO
ALTER TABLE [dbo].[ExamAnswer] ADD CONSTRAINT [FK_ExamAnswer_Student] FOREIGN KEY ([Std_id])
REFERENCES [dbo].[Student] ([Std_ID])
GO
```

Uses

[dbo].[Exam]
[dbo].[Questions]
[dbo].[Student]

Used By

[dbo].[Distribute_Exam]
[dbo].[Generate_Exam_Correction]
[dbo].[Generate_Student_Answers]
[dbo].[getExamAnswersAndGrade]

```sql
ALTER TABLE [dbo].[ExamAnswer] ADD CONSTRAINT [ExamAnswer_pk] PRIMARY KEY CLUSTERED ([Exam_id],
[Q_id], [Std_id]) ON [PRIMARY]
```

▦ [dbo].[ExamQuestion]

Properties

Property	Value
Row Count (~)	10
Created	9:53:50 PM Tuesday, February 21, 2023
Last Modified	9:54:39 PM Tuesday, February 21, 2023

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability
PK FK	Exam_ID	int	4	NOT NULL
PK FK	Q_ID	int	4	NOT NULL

Indexes

Key	Name	Key Columns	Unique
PK	PK_ExamQuestion	Exam_ID, Q_ID	True

Foreign Keys

Name	Columns
FK_ExamQuestion_Exam	Exam_ID->[dbo].[Exam].[Exam_id]
FK_ExamQuestion_Questions	Q_ID->[dbo].[Questions].[Q_ID]

SQL Script

```
CREATE TABLE [dbo].[ExamQuestion]
(
[Exam_ID] [int] NOT NULL,
[Q_ID] [int] NOT NULL
) ON [PRIMARY]
GO
ALTER TABLE [dbo].[ExamQuestion] ADD CONSTRAINT [PK_ExamQuestion] PRIMARY KEY CLUSTERED ([Exam_-
ID], [Q_ID]) ON [PRIMARY]
GO
ALTER TABLE [dbo].[ExamQuestion] ADD CONSTRAINT [FK_ExamQuestion_Exam] FOREIGN KEY ([Exam_ID])
REFERENCES [dbo].[Exam] ([Exam_id])
GO
ALTER TABLE [dbo].[ExamQuestion] ADD CONSTRAINT [FK_ExamQuestion_Questions] FOREIGN KEY ([Q_ID])
REFERENCES [dbo].[Questions] ([Q_ID])
```

```
GO
```

Uses

[dbo].[Exam]
[dbo].[Questions]

Used By

[dbo].[Distribute_Exam]
[dbo].[Generate_Exam]
[dbo].[getExamQuestions]

▦ [dbo].[Instructors]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	7
Created	3:24:52 PM Sunday, February 19, 2023
Last Modified	3:46:21 PM Sunday, February 19, 2023

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability
PK C	ins_id	int	4	NOT NULL
	ins_name	varchar(100)	100	NOT NULL
⊹	ins_phone	varchar(15)	15	NULL allowed
	dept_id	int	4	NULL allowed

Indexes

Key	Name	Key Columns	Unique
PK C	instructors_pk	ins_id	True
	instructors_uq	ins_phone	True

SQL Script

```
CREATE TABLE [dbo].[Instructors]
(
[ins_id] [int] NOT NULL,
[ins_name] [varchar] (100) COLLATE SQL_Latin1_General_CP1_CI_AS NOT NULL,
[ins_phone] [varchar] (15) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
[dept_id] [int] NULL
) ON [PRIMARY]
GO
ALTER TABLE [dbo].[Instructors] ADD CONSTRAINT [instructors_pk] PRIMARY KEY CLUSTERED ([ins_id])
ON [PRIMARY]
GO
ALTER TABLE [dbo].[Instructors] ADD CONSTRAINT [instructors_uq] UNIQUE NONCLUSTERED ([ins_phone])
ON [PRIMARY]
GO
```

Used By

[dbo].[Course]
[dbo].[Department]
[dbo].[DeleteInstructorById]
[dbo].[getInsCrs]
[dbo].[InsertInstructor]
[dbo].[SelectInstructorByIdd]
[dbo].[UpdateInstructor]

Used By

🗏 [dbo].[Questions]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	76
Created	9:14:42 PM Friday, February 17, 2023
Last Modified	9:54:39 PM Tuesday, February 21, 2023

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability
PK C	Q_ID	int	4	NOT NULL
	Q_Text	varchar(max)	max	NULL allowed
	Q_Type	varchar(50)	50	NOT NULL
	Q_ModelAnswer	varchar(50)	50	NULL allowed
	Crs_ID	int	4	NULL allowed

Indexes

Key	Name	Key Columns	Unique
PK C	PK__Question__F4FC372E9935EB94	Q_ID	True

SQL Script

```
CREATE TABLE [dbo].[Questions]
(
[Q_ID] [int] NOT NULL,
[Q_Text] [varchar] (max) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
[Q_Type] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NOT NULL,
[Q_ModelAnswer] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
[Crs_ID] [int] NULL
) ON [PRIMARY]
GO
ALTER TABLE [dbo].[Questions] ADD CONSTRAINT [PK__Question__F4FC372E9935EB94] PRIMARY KEY
CLUSTERED ([Q_ID]) ON [PRIMARY]
GO
```

Used By

[dbo].[Choices]
[dbo].[Courses_Questions]
[dbo].[ExamAnswer]
[dbo].[ExamQuestion]
[dbo].[Generate_Exam]
[dbo].[Generate_Exam_Correction]
[dbo].[getExamAnswersAndGrade]
[dbo].[getExamQuestions]

▦ [dbo].[Student]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	14
Created	10:53:50 PM Friday, February 17, 2023
Last Modified	9:54:39 PM Tuesday, February 21, 2023

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability
PK	Std_ID	int	4	NOT NULL
	St_Name	varchar(50)	50	NOT NULL
	St_Email	varchar(50)	50	NULL allowed
FK	Dept_ID	int	4	NULL allowed

Indexes

Key	Name	Key Columns	Unique
PK	PK__Student__FE2B44AEEA28933E	Std_ID	True

Foreign Keys

Name	Columns
FK_Student_Department	Dept_ID->[dbo].[Department].[Dept_ID]

SQL Script

```
CREATE TABLE [dbo].[Student]
(
[Std_ID] [int] NOT NULL,
[St_Name] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NOT NULL,
[St_Email] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
[Dept_ID] [int] NULL
) ON [PRIMARY]
GO
ALTER TABLE [dbo].[Student] ADD CONSTRAINT [PK__Student__FE2B44AEEA28933E] PRIMARY KEY CLUSTERED
([Std_ID]) ON [PRIMARY]
GO
```

```
ALTER TABLE [dbo].[Student] ADD CONSTRAINT [FK_Student_Department] FOREIGN KEY ([Dept_ID])
REFERENCES [dbo].[Department] ([Dept_ID])
GO
```

Uses

[dbo].[Department]

Used By

[dbo].[ExamAnswer]
[dbo].[Student_Courses]
[dbo].[getExamAnswersAndGrade]
[dbo].[GetStudentsByID]

```
ALTER TABLE [dbo].[Student] ADD CONSTRAINT [FK_Student_Department] FOREIGN KEY ([Dept_ID])
REFERENCES [dbo].[Department] ([Dept_ID])
```

🖼 [dbo].[Student_Courses]

Properties

Property	Value
Row Count (~)	29
Created	3:32:18 PM Sunday, February 19, 2023
Last Modified	3:42:17 PM Sunday, February 19, 2023

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability
PK FK	Crs_ID	int	4	NOT NULL
PK FK	Std_ID	int	4	NOT NULL
	Std_Grade	int	4	NULL allowed

Indexes

Key	Name	Key Columns	Unique
PK	PK__Student___A92811BF5253D152	Crs_ID, Std_ID	True

Foreign Keys

Name	Columns
FK_Student_Courses_Course	Crs_ID->[dbo].[Course].[Crs_Id]
FK_Student_Courses_Student	Std_ID->[dbo].[Student].[Std_ID]

SQL Script

```
CREATE TABLE [dbo].[Student_Courses]
(
[Crs_ID] [int] NOT NULL,
[Std_ID] [int] NOT NULL,
[Std_Grade] [int] NULL
) ON [PRIMARY]
GO
ALTER TABLE [dbo].[Student_Courses] ADD CONSTRAINT [PK__Student___A92811BF5253D152] PRIMARY KEY
CLUSTERED ([Crs_ID], [Std_ID]) ON [PRIMARY]
GO
ALTER TABLE [dbo].[Student_Courses] ADD CONSTRAINT [FK_Student_Courses_Course] FOREIGN KEY
([Crs_ID]) REFERENCES [dbo].[Course] ([Crs_Id])
```

```
GO
ALTER TABLE [dbo].[Student_Courses] ADD CONSTRAINT [FK_Student_Courses_Student] FOREIGN KEY
([Std_ID]) REFERENCES [dbo].[Student] ([Std_ID])
GO
```

Uses

[dbo].[Course]
[dbo].[Student]

Used By

[dbo].[Distribute_Exam]
[dbo].[Generate_Exam_Correction]
[dbo].[getExamGrade]
[dbo].[getInsCrs]

🔲 [dbo].[Topics]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	14
Created	9:10:27 PM Sunday, February 19, 2023
Last Modified	9:10:55 PM Sunday, February 19, 2023

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability
PK C	Topic_ID	int	4	NOT NULL
	Topic_Name	varchar(50)	50	NULL allowed
	Topic_Description	varchar(max)	max	NULL allowed
FK	Crs_ID	int	4	NULL allowed

Indexes

Key	Name	Key Columns	Unique
PK C	PK__Topics__8DEAA425D9D752B4	Topic_ID	True

Foreign Keys

Name	Columns
FK_Topics_Course	Crs_ID->[dbo].[Course].[Crs_Id]

SQL Script

```
CREATE TABLE [dbo].[Topics]
(
[Topic_ID] [int] NOT NULL,
[Topic_Name] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
[Topic_Description] [varchar] (max) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
[Crs_ID] [int] NULL
) ON [PRIMARY]
GO
ALTER TABLE [dbo].[Topics] ADD CONSTRAINT [PK__Topics__8DEAA425D9D752B4] PRIMARY KEY CLUSTERED
([Topic_ID]) ON [PRIMARY]
GO
```

```
ALTER TABLE [dbo].[Topics] ADD CONSTRAINT [FK_Topics_Course] FOREIGN KEY ([Crs_ID]) REFERENCES
[dbo].[Course] ([Crs_Id])
GO
```

Uses

[dbo].[Course]

Used By

[dbo].[get_course_Topics]

🗉 *Stored Procedures*

Objects

Name
dbo.Deletecourse
dbo.deleteDepartment
dbo.DeleteInstructorById
dbo.Distribute_Exam
dbo.Generate_Exam
dbo.Generate_Exam_Correction
dbo.Generate_Student_Answers
dbo.get_course_Topics
dbo.getExamAnswersAndGrade
dbo.getExamGrade
dbo.getExamQuestions
dbo.getInsCrs
dbo.GetStudentsByID
dbo.insertCourse
dbo.insertDepartment
dbo.InsertInstructor
dbo.SelectCourseById
dbo.selectDepartment
dbo.SelectInstructorByIdd
dbo.Updatecourse
dbo.updateDepartment
dbo.UpdateInstructor

📄 [dbo].[Deletecourse]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@crs_id	int	4

SQL Script

```sql
CREATE PROCEDURE [dbo].[Deletecourse]
  @crs_id INT
AS
BEGIN
  BEGIN TRY
    DELETE FROM Course WHERE Crs_Id = @crs_id ;
  END TRY
  BEGIN CATCH
    SELECT ERROR_MESSAGE() AS ErrorMessage;
  END CATCH
END;
GO
```

Uses

[dbo].[Course]

🖹 [dbo].[deleteDepartment]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@dept_id	int	4

SQL Script

```sql
Create PROCEDURE [dbo].[deleteDepartment] @dept_id INT
AS
    BEGIN TRY
        DELETE FROM Department
        WHERE dept_id = @dept_id
    END TRY
    BEGIN CATCH
    SELECT 'Error'
    END CATCH
GO
```

Uses

[dbo].[Department]

📄 [dbo].[DeleteInstructorById]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@ins_id	int	4

SQL Script

```sql
CREATE PROCEDURE [dbo].[DeleteInstructorById]
  @ins_id INT
AS
BEGIN
  BEGIN TRY
    DELETE FROM Instructors WHERE ins_id = @ins_id;
  END TRY
  BEGIN CATCH
    SELECT ERROR_MESSAGE() AS ErrorMessage;
  END CATCH
END;
GO
```

Uses

[dbo].[Instructors]

📖 [dbo].[Distribute_Exam]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@Exam_id	int	4
@Crs_id	int	4

SQL Script

```sql
CREATE PROCEDURE [dbo].[Distribute_Exam] @Exam_id INT,@Crs_id INT
 AS
   BEGIN
       /*
       INSERT INTO ExamAnswer (Std_id,Exam_id,Q_id)
       SELECT s.Std_ID,e.Exam_id,eq.Q_ID FROM Exam e,Student s,ExamQuestion eq,Student_Courses
sc
       WHERE sc.Crs_ID=2 AND e.Exam_id=1 AND eq.Exam_ID=1
       */
       INSERT INTO ExamAnswer(Std_id,Exam_id,Q_id)
       SELECT sc.Std_ID,eq.Exam_ID,cq.Q_ID FROM Courses_Questions cq,ExamQuestion eq,Student_-
Courses sc
       WHERE cq.Q_ID= eq.Q_ID  and  sc.Crs_ID=@Crs_id AND eq.Exam_ID=@Exam_id
   END
GO
```

Uses

[dbo].[Courses_Questions]
[dbo].[ExamAnswer]
[dbo].[ExamQuestion]
[dbo].[Student_Courses]

🗎 [dbo].[Generate_Exam]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@Crs_id	int	4
@MCQ_NO	int	4
@TF_NO	int	4

SQL Script

```
CREATE PROCEDURE [dbo].[Generate_Exam] @Crs_id INT,@MCQ_NO INT=7,@TF_NO INT=3
 AS
   BEGIN
        INSERT INTO Exam (ExamDate,ExamTime)
        values(GETDATE(),GETDATE())


        INSERT INTO ExamQuestion(Exam_ID,Q_ID)
        SELECT TOP(@MCQ_NO) e.Exam_id,Q_ID
        FROM Questions q,Exam e
        WHERE q.Crs_ID=@Crs_id AND q.Q_Type='MCQ' AND e.Exam_id IN(SELECT MAX(Exam_id) FROM Exam
e1) ORDER BY NEWID()


        INSERT INTO ExamQuestion(Exam_ID,Q_ID)
        SELECT TOP(@TF_NO) e.Exam_id,Q_ID
        FROM Questions q,Exam e
        WHERE q.Crs_ID=@Crs_id AND q.Q_Type='T/F' AND e.Exam_id IN(SELECT MAX(Exam_id) FROM Exam
e1) ORDER BY NEWID()
   END
GO
```

Uses

[dbo].[Exam]
[dbo].[ExamQuestion]
[dbo].[Questions]

🖼 [dbo].[Generate_Exam_Correction]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@Exam_id	int	4
@Std_ID	int	4
@crs_id	int	4

SQL Script

```sql
CREATE PROCEDURE [dbo].[Generate_Exam_Correction] @Exam_id INT,@Std_ID INT,@crs_id int
 AS
   BEGIN
    DECLARE @std_grade INT=0
   SELECT @std_grade = COUNT(*)*10 FROM ExamAnswer ea , Questions q
   WHERE q.Q_ID=ea.Q_id AND ea.Exam_id=@Exam_id AND ea.Std_id=@Std_ID AND q.Q_ModelAnswer=ea.St_-
Answer

   UPDATE Student_Courses
   SET Std_Grade = @std_grade
   WHERE Std_ID = @Std_ID AND Crs_ID=@crs_id
   END
GO
```

Uses

[dbo].[ExamAnswer]
[dbo].[Questions]
[dbo].[Student_Courses]

🖹 [dbo].[Generate_Student_Answers]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@Exam_id	int	4
@Std_ID	int	4
@Q_id	int	4
@answer	varchar(5)	5

SQL Script

```
   CREATE PROCEDURE [dbo].[Generate_Student_Answers] @Exam_id INT,@Std_ID INT,@Q_id INT , @answer
varchar(5)
 AS
   BEGIN
       UPDATE ExamAnswer SET St_Answer = @answer WHERE Std_id=@Std_ID AND Q_id=@Q_id AND
Exam_id=@Exam_id
   END
GO
```

Uses

[dbo].[ExamAnswer]

📖 [dbo].[get_course_Topics]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@crs_id	int	4

SQL Script

```
      CREATE PROC [dbo].[get_course_Topics] @crs_id INT
AS
    BEGIN TRY
        SELECT Topic_ID, Topic_Name, Topic_description
        FROM Topics t inner join Course c
        ON c.Crs_ID = t.Crs_ID
        WHERE t.Crs_ID = @crs_id
    END TRY

    BEGIN CATCH
        SELECT 'Error'
    END CATCH
GO
```

Uses

[dbo].[Course]
[dbo].[Topics]

🖩 [dbo].[getExamAnswersAndGrade]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@exam_id	int	4
@std_id	int	4

SQL Script

```sql
CREATE PROCEDURE [dbo].[getExamAnswersAndGrade] @exam_id INT,@std_id INT
AS
BEGIN TRY
    SELECT ea.Exam_id,q.Q_Text,ea.Std_id,ea.St_Answer
    FROM ExamAnswer ea INNER JOIN Questions q
    ON ea.Q_id = q.Q_ID
    INNER JOIN Student s
    ON ea.Std_id=s.Std_ID
    WHERE ea.Exam_ID=@exam_id AND ea.Std_id=@std_id
END try
BEGIN CATCH
    SELECT 'Error'
END CATCH
GO
```

Uses

[dbo].[ExamAnswer]
[dbo].[Questions]
[dbo].[Student]

📄 [dbo].[getExamGrade]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@std_id	int	4

SQL Script

```
CREATE PROCEDURE [dbo].[getExamGrade] @std_id INT
AS
BEGIN TRY
    SELECT c.Crs_Name,sc.Std_Grade
    FROM Student_Courses sc INNER JOIN Course c
    ON sc.Crs_ID = c.Crs_Id
    WHERE sc.Std_ID = @std_id
END try
BEGIN CATCH
    SELECT 'Error'
END CATCH
GO
```

Uses

[dbo].[Course]
[dbo].[Student_Courses]

📋 [dbo].[getExamQuestions]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@exam_id	int	4

SQL Script

```sql
CREATE PROCEDURE [dbo].[getExamQuestions] @exam_id INT
AS
BEGIN TRY
    SELECT eq.Exam_ID,q.Q_Text,c.Q_Choice
    FROM ExamQuestion eq INNER JOIN Questions q
    ON eq.Q_ID = q.Q_ID
    INNER JOIN Choices c
    ON c.Q_ID = eq.Q_ID
    WHERE eq.Exam_ID=@exam_id
END try
BEGIN CATCH
    SELECT 'Error'
END CATCH
GO
```

Uses

[dbo].[Choices]
[dbo].[ExamQuestion]
[dbo].[Questions]

📰 [dbo].[getInsCrs]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@ins_id	int	4

SQL Script

```sql
CREATE PROCEDURE [dbo].[getInsCrs] @ins_id INT
AS
BEGIN TRY
    SELECT COUNT(sc.Std_ID) Number_of_Students,c.Crs_Name
    FROM Course c INNER JOIN Instructors i
    ON c.Ins_Id = i.ins_id
    INNER JOIN Student_Courses sc
    ON c.Crs_Id = sc.Crs_ID
    WHERE c.Ins_id=@ins_id GROUP BY c.Crs_Name
END try
BEGIN CATCH
    SELECT 'Error'
END CATCH
GO
```

Uses

[dbo].[Course]
[dbo].[Instructors]
[dbo].[Student_Courses]

🖹 [dbo].[GetStudentsByID]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@DeptID	int	4

SQL Script

```sql
CREATE PROC [dbo].[GetStudentsByID] @DeptID INT
AS
BEGIN
SELECT s.Std_ID,s.St_Name,s.St_Email,d.dept_name
FROM Student s
JOIN Department d ON s.Dept_ID = d.Dept_ID WHERE s.Dept_ID = @DeptID
END
GO
```

Uses

[dbo].[Department]
[dbo].[Student]

🖾 [dbo].[insertCourse]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@crs_id	int	4
@crs_name	nchar(9)	18
@descrip	nchar(50)	100
@ins_id	int	4

SQL Script

```sql
CREATE PROCEDURE [dbo].[insertCourse]
  @crs_id int,
  @crs_name NCHAR(9),
  @descrip NCHAR(50),
  @ins_id INT
AS
BEGIN
  BEGIN TRY
    INSERT INTO Course
    VALUES ( @crs_id, @crs_name,@descrip,@ins_id);
  END TRY
  BEGIN CATCH
    SELECT ERROR_MESSAGE() AS ErrorMessage;
  END CATCH
END;
GO
```

Uses

[dbo].[Course]

🖥 [dbo].[insertDepartment]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@dept_name	nvarchar(20)	40
@dept_location	nvarchar(100)	200
@mgr_hirdate	date	3
@ins_id	int	4

SQL Script

```
CREATE PROCEDURE [dbo].[insertDepartment] @dept_name NVARCHAR(20), @dept_location NVARCHAR(100),
@mgr_hirdate DATE, @ins_id INT
AS
    BEGIN TRY
        INSERT INTO department
        VALUES (@dept_name,@dept_location,@mgr_hirdate,@ins_id)
    END TRY
    BEGIN CATCH
        SELECT 'Error'
    END CATCH
GO
```

Uses

[dbo].[Department]

🖺 [dbo].[InsertInstructor]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@ins_name	varchar(50)	50
@ins_phone	varchar(20)	20
@dept_id	int	4

SQL Script

```
CREATE PROCEDURE [dbo].[InsertInstructor]
  @ins_name VARCHAR(50),
  @ins_phone VARCHAR(20),
  @dept_id INT
AS
BEGIN
  BEGIN TRY
    INSERT INTO Instructors (ins_name, ins_phone, dept_id)
    VALUES (@ins_name, @ins_phone, @dept_id);
  END TRY
  BEGIN CATCH
    SELECT ERROR_MESSAGE() AS ErrorMessage;
  END CATCH
END;
GO
```

Uses

[dbo].[Instructors]

🖼 [dbo].[SelectCourseById]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@crs_id	int	4

SQL Script

```sql
CREATE PROCEDURE [dbo].[SelectCourseById]
  @crs_id INT
AS
BEGIN
  BEGIN TRY
    SELECT * FROM Course c WHERE c.Crs_Id = @crs_id;
  END TRY
  BEGIN CATCH
    SELECT ERROR_MESSAGE() AS ErrorMessage;
  END CATCH
END;


GO
```

Uses

[dbo].[Course]

🖾 [dbo].[selectDepartment]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@d_id	int	4

SQL Script

```sql
CREATE PROCEDURE [dbo].[selectDepartment] @d_id INT
AS
    BEGIN TRY
        SELECT * FROM department
        WHERE dept_id = @d_id
    END TRY
    BEGIN CATCH
        SELECT 'Error'
    END CATCH
GO
```

Uses

[dbo].[Department]

▦ [dbo].[SelectInstructorByIdd]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@ins_id	int	4

SQL Script

```
CREATE PROCEDURE [dbo].[SelectInstructorByIdd]
  @ins_id INT
AS
BEGIN
  BEGIN TRY
    SELECT * FROM Instructors i WHERE ins_id = @ins_id;
  END TRY
  BEGIN CATCH
    SELECT ERROR_MESSAGE() AS ErrorMessage;
  END CATCH
END;
GO
```

Uses

[dbo].[Instructors]

🖾 [dbo].[Updatecourse]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@crs_id	int	4
@crs_name	nchar(19)	38
@descrip	nchar(50)	100
@ins_id	int	4

SQL Script

```sql
CREATE PROCEDURE [dbo].[Updatecourse]
  @crs_id int,
  @crs_name NCHAR(19),
  @descrip NCHAR(50),
  @ins_id INT
AS
BEGIN
  BEGIN TRY
    UPDATE Course
    SET Crs_Id =  @crs_id,
        Crs_Name = @crs_name,
        Crs_Description = @descrip,
        Ins_Id= @ins_id
    WHERE Ins_Id= @ins_id;
  END TRY
  BEGIN CATCH
    SELECT ERROR_MESSAGE() AS ErrorMessage;
  END CATCH
END;
GO
```

Uses

[dbo].[Course]

🖿 [dbo].[updateDepartment]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@d_id	int	4
@dept_name	nvarchar(20)	40
@dept_location	nvarchar(100)	200
@mgr_hiredate	date	3
@ins_id	int	4

SQL Script

```sql
CREATE PROCEDURE [dbo].[updateDepartment] @d_id INT, @dept_name NVARCHAR(20), @dept_location
NVARCHAR(100), @mgr_hiredate DATE, @ins_id INT
AS
    BEGIN TRY
        UPDATE department
        SET dept_name = @dept_name,dept_location =@dept_location,mgr_hiredate =
@mgr_hiredate,ins_id = @ins_id
        WHERE dept_id = @d_id
    END TRY
    BEGIN CATCH
        SELECT 'Error'
    END CATCH
GO
```

Uses

[dbo].[Department]

🖽 [dbo].[UpdateInstructor]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@ins_id	int	4
@ins_name	varchar(100)	100
@ins_phone	varchar(15)	15
@dept_id	int	4

SQL Script

```sql
CREATE PROCEDURE [dbo].[UpdateInstructor]
  @ins_id INT,
  @ins_name VARCHAR(100),
  @ins_phone VARCHAR(15),
  @dept_id INT
AS
BEGIN
  BEGIN TRY
    UPDATE Instructors
    SET ins_name = @ins_name,
        ins_phone = @ins_phone,
        dept_id = @dept_id
    WHERE ins_id = @ins_id;
  END TRY
  BEGIN CATCH
    SELECT ERROR_MESSAGE() AS ErrorMessage;
  END CATCH
END;
GO
```

Uses

[dbo].[Instructors]

👤 *Users*

Objects

Name
dbo
guest

👤 dbo

Properties

Property	Value
Type	WindowsUser
Default Schema	dbo

Database Level Permissions

Type	Action
CONNECT	Grant

SQL Script

```
GO
```

👤 guest

Properties

Property	Value
Type	SqlUser
Default Schema	guest

SQL Script

```
GO
```

👥 *Database Roles*

Objects

Name
db_accessadmin
db_backupoperator
db_datareader
db_datawriter
db_ddladmin
db_denydatareader
db_denydatawriter
db_owner
db_securityadmin
public

👥 db_accessadmin

Properties

Property	Value
Owner	dbo

👥 db_backupoperator

Properties

Property	Value
Owner	dbo

👥 db_datareader

Properties

Property	Value
Owner	dbo

👥 db_datawriter

Properties

Property	Value
Owner	dbo

👥 db_ddladmin

Properties

Property	Value
Owner	dbo

👥 db_denydatareader

Properties

Property	Value
Owner	dbo

👥 db_denydatawriter

Properties

Property	Value
Owner	dbo

👥 db_owner

Properties

Property	Value
Owner	dbo

👥 db_securityadmin

Properties

Property	Value
Owner	dbo

👥 public

Properties

Property	Value
Owner	dbo