

iti

# Examination System SD\_41@DESKTOP- N30H4K1

Data Dictionary

2/7/2021
























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## Legend

-  Primary key
-  Primary key disabled
-  User-defined primary key
-  Unique key
-  Unique key disabled
-  User-defined unique key
-  Active trigger
-  Disabled trigger
-  Many to one relation
-  User-defined many to one relation
-  One to many relation
-  User-defined one to many relation
-  Many to many relation
-  User-defined many to many relation
-  One to one relation
-  User-defined one to one relation
-  Input
-  Output
-  Input/Output
-  Uses dependency
-  User-defined uses dependency
-  Used by dependency
-  User-defined used by dependency

## 1. Tables

## 1.1. Table: Courses





## Columns

	Name	Data type	Description / Attributes
	CrsID	int	
	CrsName	varchar(50)	Nullable
	TopicID	int	Nullable References: Topic

## Links to

Table	Join	Title / Name / Description
 Topic	<b>Courses</b> TopicID = TopicTopicID	FK_Courses_Topic



## Linked from

Table	Join	Title / Name / Description
 CsExamDetails	<b>Courses</b> CrsID = CsExamDetailsCrslD	FK_CsExamDetails_Courses
 InstructorCourse	<b>Courses</b> CrsID = InstructorCourseCrslD	FK_InstructorCourse_Courses
 Questions	<b>Courses</b> CrsID = QuestionsCrslD	FK_Questions_Courses
 StudentCourse	<b>Courses</b> CrsID = StudentCourseCrslD	FK_StudentCourse_Courses










## Unique keys


Columns	Name / Description
 CrsID	PK_Courses

## Uses

Name
 <b>Courses</b>
 Topic

## Used By








Name
 <b>Courses</b>
 ExamDetails
 getCourses
 GetInstructorCourseData
 getStudentCourses
 GetStudentGrade
 getTopics
 InsGenerateExam
 showGrade

Name	
 sp_getCourses	
→ CsExamDetails	
→ InstructorCourse	
→ Questions	
→ StudentCourse	




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## 1.2. Table: CsExamDetails

### Columns

Name		Data type	Description / Attributes
	 AnswersID	int	Identity / Auto increment
	CrsID	int	Nullable References: Courses
	StId	int	Nullable References: Student
	ExamID	int	Nullable References: Exam
	ExamDate	date	Nullable
	StExamGrade	int	Nullable


### Links to

Table	Join	Title / Name / Description
 Courses	<b>CsExamDetails</b> CrsID = CoursesCrsID	FK_CsExamDetails_Courses
 Exam	<b>CsExamDetails</b> ExamID = ExamExamID	FK_CsExamDetails_Exam
 Student	<b>CsExamDetails</b> StId = StudentStId	FK_CsExamDetails_Student





### Linked from

Table	Join	Title / Name / Description
 StudentAnswer	<b>CsExamDetails</b> AnswersID = StudentAnswerAnswerID	FK_StudentAnswer_CsExamDetails







### Unique keys

Columns	Name / Description
 AnswersID	PK_Test

### Uses

Name
 <b>CsExamDetails</b>
 Courses
 Exam
 Student

### Used By

Name
 <b>CsExamDetails</b>
 checkdate
 ExamCorrection
 ExamDetails
 getAnswerid
 getCourseExamDateandid









Name
⚙️ getExamId
⚙️ getStudentGradeIfFound
⚙️ InsertStudAnswer
⚙️ InsGenerateExam
⚙️ RRequestReExamination
⚙️ StExamRetrival
⚙️ UpdateStudGrade
← StudentAnswer


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### 1.3. Table: Department



#### Columns

Name		Data type	Description / Attributes
	DID	int	
	DName	varchar(50)	Nullable
	DDescription	varchar(MAX)	Nullable
	DLocation	varchar(50)	Nullable
	ManagerHireDate	date	Nullable
	DeptManger	int	Nullable References: Instructor

#### Links to

Table	Join	Title / Name / Description
 Instructor	<b>Department</b> DeptManger = InstructorInsID	FK_Department_Instructor


#### Linked from

Table	Join	Title / Name / Description
 Instructor	<b>Department</b> DID = InstructorDeptID	FK_Instructor_Department
 Student	<b>Department</b> DID = StudentDeptID	FK_Student_Department





#### Unique keys

Columns	Name / Description
 DID	PK_Department

#### Uses




Name
 <b>Department</b>
 Instructor

#### Used By



Name
 <b>Department</b>
 V_getstudent
 GetStudentInformation
 Instructor
 Student

## 1.4. Table: Exam


### Columns

Name		Data type	Description / Attributes
	ExamID	int	Identity / Auto increment
	ExamDuration	int	Nullable Default: 1
	ExamGrade	numeric(18, 3)	Nullable









### Linked from

Table	Join	Title / Name / Description
 CsExamDetails	<b>Exam</b> ExamID = CsExamDetailsExamID	FK_CsExamDetails_Exam
 ExamQuestion	<b>Exam</b> ExamID = ExamQuestionExamID	FK_ExamQuestion_Exam

### Unique keys





Columns	Name / Description
 ExamID	PK_Exam

### Used By



Name
 <b>Exam</b>
 ExamDetails
 GetExamDetail
 InsGenerateExam
 RRequestReExamination
 StExamRetrival
 CsExamDetails
 ExamQuestion

## 1.5. Table: ExamQuestion


### Columns

Name		Data type	Description / Attributes
	 ExamID	int	<b>References:</b> Exam
	 QID	int	<b>References:</b> Questions




### Links to

Table	Join	Title / Name / Description
 Exam	<b>ExamQuestion</b> ExamID = ExamExamID	FK_ExamQuestion_Exam
 Questions	<b>ExamQuestion</b> QID = QuestionsQID	FK_ExamQuestion_Questions







### Unique keys

Columns	Name / Description
 ExamID, QID	PK_ExamQuestion

### Uses




Name
 <b>ExamQuestion</b>
 Exam
 Questions

### Used By



Name
 <b>ExamQuestion</b>
 ExamDetails
 getAllModelAnswers
 GetExamDetail
 InsGenerateExam
 RQuestReExamination
 StExamRetrival

## 1.6. Table: Instructor



### Columns

Name		Data type	Description / Attributes
	InsID	int	<b>References:</b> Users
	Salary	int	<b>Nullable</b>
	DeptID	int	<b>Nullable</b> <b>References:</b> Department

### Links to

Table	Join	Title / Name / Description
 Department	<b>Instructor</b> DeptID = DepartmentDID	FK_Instructor_Department
 Users	<b>Instructor</b> InsID = UsersUserId	FK_Instructor_Users




### Linked from

Table	Join	Title / Name / Description
 Department	<b>Instructor</b> InsID = DepartmentDeptManger	FK_Department_Instructor
 InstructorCourse	<b>Instructor</b> InsID = InstructorCourseInsID	FK_InstructorCourse_Instructor





### Unique keys

Columns	Name / Description
 InsID	PK_Instructor

### Uses





Name
 <b>Instructor</b>
 Department
 Users

### Used By



Name
 <b>Instructor</b>
 GetInstructorCourseData
 Department
 InstructorCourse

## 1.7. Table: InstructorCourse


### Columns

Name		Data type	Description / Attributes
 	CrsID	int	<b>References:</b> Courses
 	InsID	int	<b>References:</b> Instructor




### Links to

Table	Join	Title / Name / Description
 Courses	<b>InstructorCourse</b> CrsID = CoursesCrsID	FK_InstructorCourse_Courses
 Instructor	<b>InstructorCourse</b> InsID = InstructorInsID	FK_InstructorCourse_Instructor





### Unique keys

Columns	Name / Description
 CrsID, InsID	PK_InsCourse

### Uses





Name
 <b>InstructorCourse</b>
 Courses
 Instructor

### Used By


Name
 <b>InstructorCourse</b>
 getCourses
 GetInstructorCourseData
 sp_getCourses

## 1.8. Table: McqChoices

### Columns

Name		Data type	Description / Attributes
 	QID	int	<b>References:</b> Questions
 	QChoice	varchar(200)	



### Links to

Table	Join	Title / Name / Description
 Questions	<b>McqChoices</b> QID = QuestionsQID	FK_McqChoices_Questions





### Unique keys

Columns	Name / Description
 QID, QChoice	PK_MCQ

### Uses









Name
 <b>McqChoices</b>
 Questions

### Used By


Name
 <b>McqChoices</b>
 GetExamDetail
 GetQChoices
 StExamRetrival

## 1.9. Table: Questions




### Columns

Name		Data type	Description / Attributes
	 QID	int	
	QHeader	varchar(MAX)	
	QBody	varchar(MAX)	
	QGrade	int	Nullable Default: 4
	Qtype	varchar(3)	
	ModelAnswer	varchar(MAX)	
	CrslID	int	References: Courses

### Links to

Table	Join	Title / Name / Description
 Courses	<b>Questions</b> CrslID = CoursesCrslID	FK_Questions_Courses



### Linked from

Table	Join	Title / Name / Description
 ExamQuestion	<b>Questions</b> QID = ExamQuestionQID	FK_ExamQuestion_Questions
 McqChoices	<b>Questions</b> QID = McqChoicesQID	FK_McqChoices_Questions
 StudentAnswer	<b>Questions</b> QID = StudentAnswerQID	FK_StudentAnswer_Questions










### Unique keys

Columns	Name / Description
 QID	PK_Questions

### Uses

Name
 <b>Questions</b>
 Courses

### Used By

Name
 <b>Questions</b>
 ExamCorrection
 ExamDetails
 getAllModelAnswers
 GetExamDetail
 InsGenerateExam
 RRequestReExamination
 StExamRetrival
 ExamQuestion






Name	
←	McqChoices
←	StudentAnswer



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## 1.10. Table: Student



### Columns

Name		Data type	Description / Attributes
	StID	int	<b>References:</b> Users
	StRegDate	date	<b>Nullable</b>
	DeptID	int	<b>Nullable</b> <b>References:</b> Department

### Links to

Table	Join	Title / Name / Description
 Department	<b>Student</b> DeptID = DepartmentDID	FK_Student_Department
 Users	<b>Student</b> StID = UsersUserId	FK_Student_Users




### Linked from

Table	Join	Title / Name / Description
 CsExamDetails	<b>Student</b> StID = CsExamDetailsStId	FK_CsExamDetails_Student
 StudentCourse	<b>Student</b> StID = StudentCourseStID	FK_StudentCourse_Student










### Unique keys

Columns	Name / Description
 StID	PK_Student_1

### Uses






Name
 <b>Student</b>
 Department
 Users

### Used By

Name
 <b>Student</b>
 V_getstudent
 fillStudentCourse
 GetStudentGrade
 GetStudentInformation
 showGrade
 StudentSignUp
 CsExamDetails
 StudentCourse

## 1.11. Table: StudentAnswer


### Columns

	Name	Data type	Description / Attributes
	Answer	varchar(50)	
 	QID	int	<b>References:</b> Questions
 	AnswerID	int	<b>References:</b> CsExamDetails


### Links to

	Table	Join	Title / Name / Description
➤	CsExamDetails	<b>StudentAnswer</b> AnswerID = CsExamDetailsAnswersID	FK_StudentAnswer_CsExamDetails
➤	Questions	<b>StudentAnswer</b> QID = QuestionsQID	FK_StudentAnswer_Questions






### Unique keys

	Columns	Name / Description
	QID, AnswerID	PK_StudentAnswer

### Uses




	Name
 <b>StudentAnswer</b>	
➤	CsExamDetails
➤	Questions

### Used By



	Name
 <b>StudentAnswer</b>	
	ExamCorrection
	ExamDetails
	getAllStudAnswers
	InsertStudAnswer

## 1.12. Table: StudentCourse


### Columns

	Name	Data type	Description / Attributes
	CrsID	int	<b>References:</b> Courses
	StID	int	<b>References:</b> Student
	StGrade	int	<b>Nullable</b>




### Links to

Table	Join	Title / Name / Description
 Courses	<b>StudentCourse</b> CrsID = CoursesCrsID	FK_StudentCourse_Courses
 Student	<b>StudentCourse</b> StID = StudentStID	FK_StudentCourse_Student




### Unique keys

Columns	Name / Description
 CrsID, StID	PK_StudentCourse

### Uses




Name
 <b>StudentCourse</b>
 Courses
 Student

### Used By


Name
 <b>StudentCourse</b>
 fillStudentCourse
 GetInstructorCourseData
 getStudentCourses
 GetStudentExamCourseGrade
 GetStudentGrade
 InsGenerateExam
 showGrade
 UpdateStudGrade

### 1.13. Table: Topic


#### Columns

Name		Data type	Description / Attributes
	 TopicID	int	
	TopicName	varchar(50)	






#### Linked from

Table	Join	Title / Name / Description
 Courses	<b>Topic</b> TopicID = CoursesTopicID	FK_Courses_Topic

#### Unique keys












Columns	Name / Description
 TopicID	PK_Topic

#### Used By



Name
 <b>Topic</b>
 getCourses
 getTopics
 sp_getCourses
 Courses

## 1.14. Table: Users

### Columns

Name		Data type	Description / Attributes
	 UserId	int	Identity / Auto increment
	Fname	varchar(20)	Nullable
	Lname	varchar(20)	Nullable
	ZipCode	int	Nullable
	City	varchar(15)	Nullable
	Street	varchar(100)	Nullable
	User_Password	varchar(20)	
	 UserEmail	varchar(30)	
	UserType	varchar(1)	Default: 'S'













### Linked from

Table	Join	Title / Name / Description
 Instructor	<b>Users</b> UserId = InstructorInsID	FK_Instructor_Users
 Student	<b>Users</b> UserId = StudentStID	FK_Student_Users

### Unique keys

Columns	Name / Description
 UserId	PK_User
 UserEmail	UQ_Users__08638DF83F2F7549




### Used By

Name
 <b>Users</b>
 getCourses
 GetInstructorCourseData
 GetStudentGrade
 GetStudentInformation
 getStudentName
 getUserId
 showGrade
 StudentLogin
 StudentSignUp
 Instructor
 Student




## 2. Views

### 2.1. View: V\_getstudent

#### Columns

Name		Data type	Description / Attributes
	StID	int	
	StRegDate	date	Nullable
	DeptID	int	Nullable

#### Uses

Name	
 V_getstudent	
 Department	
 student	








## 3. Procedures

### 3.1. Procedure: ExamDetails

#### Input/Output

	Name	Data type	Description
→@	examID	int	
→@	studentID	int	

#### Uses

Name
 ExamDetails
 Courses
 CsExamDetails
 Exam
 ExamQuestion
 Questions
 StudentAnswer

#### Script

```
CREATE proc ExamDetails @examID int , @studentID int
AS
begin
    select DISTINCT e.ExamID , q.QHeader,q.QBody , sa.Answer
    from Exam e
        inner join ExamQuestion eq on eq.ExamId=e.ExamId
        inner join Questions q on q.Qid=eq.Qid
        inner join CsExamDetails ced on ced.ExamId=e.ExamId
        inner join Courses C on C.CrsID= ced.CrsID
        inner join StudentAnswer sa on sa.AnswerID=ced.AnswersID and q.QID=sa.QID
    where (e.ExamID = @examID) and (ced.StId=@studentID)
end
```



3.2. Procedure: fillStudentCourse

Input/Output

Name		Data type	Description
→@	stid	int	
→@	deptid	int	
→@	crsId	int	

Uses

Name	
⚙ fillStudentCourse	
📄 Student	
📄 StudentCourse	

Script

```
CREATE proc fillStudentCourse @stid int,@deptid int, @crsId int
AS
begin
insert into StudentCourse (StId,CrsId)
values (@stid,@crsId)
UPDATE Student set DeptID =@deptid where StID=@stid;
end
```

3.3. Procedure: getAllModelAnswers

Input/Output

Name		Data type	Description
→@	examid	int	

Uses

Name	
⚙️	getAllModelAnswers
📄	ExamQuestion
📄	Questions

Script

```
create proc getAllModelAnswers @examid int
as
begin
select q.ModelAnswer from ExamQuestion e
inner join Questions q on e.QID=q.QID
where e.ExamID=@examid
end
```

3.4. Procedure: getAllStudAnswers

Input/Output

Name		Data type	Description
→@	answerid	int	

Uses

Name	
⚙️	getAllStudAnswers
📄	StudentAnswer

Script

```
create proc getAllStudAnswers @answerid int
as
begin
select Answer from StudentAnswer s where AnswerID=@answerid
end
```

3.5. Procedure: getAnswerid

Input/Output

Name		Data type	Description
→@	crsid	int	
→@	stid	int	
→@	examid	int	

Uses

Name	
⚙️	getAnswerid
📊	CsExamDetails

Script

```
CREATE proc getAnswerid @crsid int,@stid int,@examid int
as
begin
select AnswersID
from CsExamDetails
where CrsID=@crsid and StId=@stid and ExamID=@examid
end
```

3.6. Procedure: getCourseExamDateandid

Input/Output

Name		Data type	Description
➔@	stID	int	
➔@	CID	int	

Uses

Name	
⚙️	getCourseExamDateandid
📊	CsExamDetails

Script

```
CREATE proc [dbo].[getCourseExamDateandid] @stID int , @CID int
as
begin
select CED.ExamDate , CED.ExamID
from CsExamDetails CED
where CED.CrsID = @CID and CED.StId = @stID
end
```

3.7. Procedure: getCourses

Input/Output

Name		Data type	Description
→@	topicName	varchar(50)	
→@	email	varchar(30)	

Uses

Name	
⚙️	getCourses
📄	Courses
📄	InstructorCourse
📄	Topic
📄	Users

Script

```
create proc getCourses @topicName varchar(50),@email varchar(30)
as
begin
    select CrsName
    from Courses c
        inner join Topic T on c.TopicID=T.TopicID
        inner join InstructorCourse ic on ic.CrsID=c.CrsID
        inner join Users u on u.UserId=ic.InsID
    where u.UserEmail=@email and T.TopicName=@topicName ;
end
```

3.8. Procedure: GetExamDetail

Input/Output

Name		Data type	Description
➔@	ExamID	int	

Uses

Name	
⚙️	GetExamDetail
📄	Exam
📄	ExamQuestion
📄	McqChoices
📄	Questions

Script

```
CREATE proc [dbo].[GetExamDetail] @ExamID int
as
begin
select q.QID,q.QHeader,q.QBody,mc.Qchoice from Exam e
inner join ExamQuestion eq on eq.ExamId=e.ExamId
inner join Questions q on q.Qid=eq.Qid
inner join McqChoices mc on mc.Qid=q.Qid
where e.ExamId=@ExamID
end
```

3.9. Procedure: getExamId

Input/Output

Name		Data type	Description
➔@	crsid	int	
➔@	stid	int	
➔@	examdate	date	

Uses

Name	
⚙️	getExamId
📊	CsExamDetails

Script

```
CREATE proc getExamId @crsid int,@stid int,@examdate date
as
begin
select ExamID
from CsExamDetails Cs
where CrsID=@crsid and StId=@stid and ExamDate=@examdate
end
```



3.10. Procedure: GetInstructorCourseData

Input/Output

Name		Data type	Description
→@	insID	int	

Uses

Name	
⚙️	GetInstructorCourseData
📄	Courses
📄	Instructor
📄	InstructorCourse
📄	StudentCourse
📄	Users

Script

```
CREATE procedure GetInstructorCourseData @insID int
AS
begin
select U.Fname AS 'Instructor Name',C.CrsName,count(*) AS
NumberOfStudnt
from Courses C
inner join InstructorCourse IC on C.CrsID =IC.CrsID
inner join Instructor I on I.InsID=IC.InsID
inner join Users U on U.UserId=I.InsID
inner join StudentCourse SC on C.CrsID = SC.CrsID
where IC.InsID=@insID
group by C.CrsName,U.Fname
end
```

3.11. Procedure: GetQChoices

Input/Output

Name		Data type	Description
→@	QID	int	

Uses

Name	
⚙️	GetQChoices
📊	McqChoices

Script

```
CREATE proc [dbo].[GetQChoices] @QID int
as
begin
select *
from McqChoices
where QID = @QID
end
```

3.12. Procedure: getStudentCourses

Input/Output

Name		Data type	Description
➔@	stdID	int	

Uses

Name	
⚙️	getStudentCourses
📊	Courses
📊	StudentCourse

Script

```
CREATE proc [dbo].[getStudentCourses] @stdID int
as
begin
select c.CrsName 'CourseName', c.CrsID 'CourseID'
from Courses c
inner join StudentCourse sc on sc.CrsID=c.CrsID
where sc.StID=@stdID
end
```

3.13. Procedure: GetStudentExamCourseGrade

Input/Output

Name		Data type	Description
➔@	studentID	int	
➔@	crsid	int	

Uses

Name	
⚙ GetStudentExamCourseGrade	
📄 StudentCourse	

Script

```
CREATE procedure GetStudentExamCourseGrade @studentID int , @crsid int
AS
begin
select st.StGrade
from StudentCourse St
where st.StID = @studentID and St.CrsID=@crsid
end
```

3.14. Procedure: GetStudentGrade

Input/Output

Name		Data type	Description
➔@	studentID	int	

Uses

Name	
⚙️	GetStudentGrade
📄	Courses
📄	Student
📄	StudentCourse
📄	Users

Script

```
CREATE procedure GetStudentGrade @studentID int
AS
begin
select u.UserId ,['FullName']= u.FName + u.LName, t.StGrade,C.CrsName
from Users u
inner join Student s on u.UserId=s.StID
inner join StudentCourse t on s.StID = t.StID
inner join Courses C on C.CrsID=t.CrsID
where s.StID = @studentID
end
```

3.15. Procedure: getStudentGradeIfFound

Input/Output

Name		Data type	Description
→@	crsid	int	
→@	stid	int	
→@	examdate	date	

Uses

Name	
⚙️	getStudentGradeIfFound
📊	CsExamDetails

Script

```
CREATE proc getStudentGradeIfFound @crsid int,@stid int,@examdate date
as
begin
select StExamGrade
from CsExamDetails Cs
where CrsID=@crsid and StId=@stid and ExamDate=@examdate
end
```

3.16. Procedure: GetStudentInformation

Input/Output

Name		Data type	Description
→@	departmentnumber	int	

Uses

Name	
⚙️	GetStudentInformation
📄	Department
📄	Student
📄	Users

Script

```
CREATE procedure GetStudentInformation @departmentnumber int
AS
begin
    select U.*,D.DID from Users U
    inner join Student S on U.UserId=S.StID
    inner join Department D on D.DID=S.DeptID
    where d.DID=@departmentnumber
end
```

3.17. Procedure: getStudentName

Input/Output

Name		Data type	Description
➔@	id	int	

Uses

Name	
⚙️	getStudentName
📊	users

Script

```
CREATE proc [dbo].[getStudentName] @id int
as
begin
select Fname+' '+Lname as fullname from users where UserId = @id
end
```



3.18. Procedure: getTopics

Input/Output

Name		Data type	Description
➔@	TopicID	int	

Uses

Name	
⚙️	getTopics
📄	Courses
📄	Topic

Script



```
CREATE proc getTopics @TopicID int
AS
begin
    select c.*,t.TopicName
    from Topic t
    inner join Courses c on c.TopicID = t.TopicID
    where t.TopicID = @TopicID
end
```

3.19. Procedure: getUserId

Input/Output

Name		Data type	Description
	email	varchar(30)	

Uses

Name	
	getUserId
	Users

Script

```
create proc getUserId @email varchar(30)
as
begin
    select UserId from Users where UserEmail=@email
end
```



### 3.20. Procedure: InsertStudAnswer

#### Input/Output

Name		Data type	Description
→@	stId	int	
→@	crsId	int	
→@	examID	int	
→@	Qid	int	
→@	studentAns	varchar(1)	

#### Uses

Name
⚙️ InsertStudAnswer
📊 CsExamDetails
📊 StudentAnswer

#### Script

```
CREATE proc InsertStudAnswer @stId int, @crsId int, @examID int,@Qid int, @studentAns varchar(1)
AS
begin
    insert into StudentAnswer (AnswerID,QID,Answer)
    select ced.AnswersID,@Qid,@studentAns
    from CsExamDetails ced
    where ced.StId=@stId and ced.CrsId=@crsId and ced.ExamId=@examID
end
```

### 3.21. Procedure: InsGenerateExam

#### Input/Output

Name		Data type	Description
→@	MCQnum	int	
→@	TFnum	int	
→@	CourseName	varchar(50)	
→@	ExamDate	date	

#### Uses

Name	
⚙ InsGenerateExam	
📊 Courses	
📊 CsExamDetails	
📊 Exam	
📊 ExamQuestion	
📊 Questions	
📊 StudentCourse	

#### Script

```
CREATE proc InsGenerateExam @MCQnum int , @TFnum int, @CourseName varchar(50),@ExamDate date
AS
begin
    declare @CourseId int
    select @CourseId= c.CrsID from Courses c where c.CrsName = @CourseName
    declare @studentCounts int
    select @studentCounts= count (*) from
        ((select StId from StudentCourse sc where CrsID=@CourseId
        except
        select StId from CsExamDetails where CrsID=@CourseId))as studentIds
    if(@studentCounts>0)
    begin
        insert into Exam (ExamGrade)
        values ((@MCQnum*4)+(@TFnum*4))
        insert into ExamQuestion (ExamId,QID)
        select top(@MCQnum) (select Max(ExamId) from Exam),Q.QID
        from Questions Q
        where Q.Qtype = 'MCQ'
        and Q.CrsId = @CourseId
        order by NEWID()

        insert into ExamQuestion (ExamId,QID)
        select top(@TFnum) (select Max(ExamId) AS 'Exam_ID' from Exam),Q.QID
        from Questions Q
        where Q.Qtype = 'TF'
        and Q.CrsId = @CourseId
        order by NEWID()

        insert into CsExamDetails (CrsId,ExamId,ExamDate,StId)
        select @CourseId,(select Max(ExamId) from Exam),@ExamDate,StId
        from StudentCourse sc where CrsID=@CourseId
    except
    select @CourseId,(select Max(ExamId) from Exam),@ExamDate,StId
    from CsExamDetails where CrsID=@CourseId
end
```

## 3.22. Procedure: RRequestReExamination

### Input/Output

	Name	Data type	Description
→@	Stid	int	
→@	CourseId	int	
→@	ExamDate	date	

### Uses

Name
⚙ RRequestReExamination
📄 CsExamDetails
📄 Exam
📄 ExamQuestion
📄 Questions

### Script

```
CREATE proc RRequestReExamination @Stid int,@CourseId int,@ExamDate date
AS
begin

    declare @studentCounts int

    select @studentCounts= COUNT(StId) from CsExamDetails where CrsId=@CourseId And StExamGrade<36 and StExamGrade is NOT
    NULL
        and StId=@Stid

    if(@studentCounts<2)
    begin
        insert into Exam (ExamGrade)
        values ((10*4)+(5*4))
        insert into ExamQuestion (ExamId,QID)
        select top (10) (select Max(ExamId) from Exam),Q.QID
        from Questions Q
        where Q.Qtype = 'MCQ'
        and Q.CrsId = @CourseId
        order by NEWID()

        insert into ExamQuestion (ExamId,QID)
        select top (5) (select Max(ExamId) AS 'Exam_ID' from Exam),Q.QID
        from Questions Q
        where Q.Qtype = 'TF'
        and Q.CrsId = @CourseId
        order by NEWID()

        insert into CsExamDetails (CrsId,ExamId,ExamDate,StId)
        select @CourseId,(select Max(ExamId) from Exam),@ExamDate,@Stid

    end
end
```

3.23. Procedure: StudentLogin

Input/Output

Name		Data type	Description
➔@	stEmail	varchar(30)	
➔@	stpassword	varchar(20)	

Uses

Name	
⚙ StudentLogin	
📊 Users	

Script

```
CREATE proc StudentLogin @stEmail varchar(30), @stpassword varchar(20)
AS
begin
select count(*)
from Users u
where u.UserEmail=@stEmail and u.User_Password=@stpassword
end
```

### 3.24. Procedure: StudentSignUp

#### Input/Output

Name		Data type	Description
➔@	stFName	varchar(20)	
➔@	stLName	varchar(20)	
➔@	stZipCode	int	
➔@	stCity	varchar(15)	
➔@	stStreet	varchar(100)	
➔@	Stpassword	varchar(20)	
➔@	stEmail	varchar(30)	

#### Uses

Name	
⚙️ StudentSignUp	
📊 Student	
📊 Users	

#### Script

```
CREATE proc StudentSignUp @stFName varchar(20), @stLName varchar(20),@stZipCode int,
@stCity varchar(15),@stStreet varchar(100),@Stpassword varchar(20),@stEmail varchar(30)
AS
begin
insert into Users (FName,LName,ZipCode,City,Street,User_Password,UserEmail)
values (@stFName,@stLName,@stZipCode,@stCity,@stStreet,@Stpassword,@stEmail)
insert into Student (StId,StRegDate)
select Max(UserId),getdate() from users
end
```

3.25. Procedure: UpdateStudGrade

Input/Output

Name		Data type	Description
→@	AnsId	int	
→@	StuGrade	int	
→@	stId	int	
→@	crsId	int	

Uses

Name	
⚙ UpdateStudGrade	
📄 CsExamDetails	
📄 StudentCourse	

Script

```
create proc UpdateStudGrade @AnsId int,@StuGrade int,@stId int,@crsId int
as
begin
    update CsExamDetails
    set StExamGrade=@StuGrade
    where AnswersID=@AnsId

    update StudentCourse
    set StGrade=@StuGrade
    where StID=@stId and CrsID=@crsId
end
```