functions

FUNCTION(1) calculate student degrees

alter function calaculate\_degrees ()

returns @T table (

st\_id int,

total\_degree int,

C\_id int

)

as

begin

insert into @T

select A.st\_id, SUM(Q.Q\_degree) AS total\_degree , c.C\_id

from Question\_pool Q ,answers A , course C

where A.answer = Q.corr\_ans and Q.Q\_id = A.Q\_id and c.C\_id = a.c\_id

group by A.st\_id, C.C\_id

return

end

select \* from calaculate\_degrees()

FUNCTION(2) to get each exam info temp

create function exam\_info (@course\_id int)

returns @t table (

course\_name nvarchar(50),

C\_id int,

Exam\_type nvarchar(50),

track nvarchar(50),

branch nvarchar(50),

intake int ,

star\_time time ,

end\_time time ,

total\_time int,

total\_degree int

)

as

begin

insert into @t

select C.C\_name,C.C\_id , E.type , T.Track\_name , b.Bran\_city , I.Intake\_num , E.start\_time , E.end\_time , E.duration , E.total\_degree

from Course C ,Track\_Course TC , Track T , Branch\_track BT ,Branch B , Branch\_Intake BI,

Intake I , Exam E

where C.C\_id = tc.C\_ID and TC.Track\_ID = t.Track\_id

and T.Track\_id = BT.Track\_ID and BT.Bran\_ID = b.Bran\_id

and b.Bran\_id = BI.Bran\_ID and BI.Intake\_ID = I.Intake\_id

and C.C\_id = E.C\_id and C.C\_id = @course\_id

return

end

select \* from exam\_info(25)

FUNCTION(3) --- function get max degree for course to add check constriant to check total degree of course before insertion

CREATE FUNCTION GetMaxDegreeForCourse(@C\_id INT)

RETURNS INT

AS

BEGIN

DECLARE @MaxDegree INT;

SELECT @MaxDegree = max\_degree

FROM Course

WHERE C\_id = @C\_id;

RETURN @MaxDegree;

END;

select dbo.GetMaxDegreeForCourse(25)

ALTER TABLE dbo.exam

ADD CONSTRAINT check\_total\_degree

CHECK (total\_degree <= dbo.GetMaxDegreeForCourse(C\_id));