

**User** (UID, Username, Password, Email, Role)

**Lecturer** (UID, Schedule)

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*Lecturer.UID references User.UID*

**LecturerFields**(LecturerID, field)

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*LecturerFields.LecturerID references Lecturer.UID*

**LecturersPhoneNums** (LecturerID, Phone)

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*LecturersPhoneNums.LecturerID references Lecturer.UID*

**Company** (UID, Name, Rep\_Name, Rep\_Email, Location)

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*Company.UID references User.UID*

**Employee** (Staff\_ID, Company\_ID Name, Email, Field, Phone)

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*Employee.Company\_ID references Company.UID*

**ES** (UID, Field, Country, Office)

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*ES.UID references User.UID*

**ESPhoneNums** (ESID, Phone)

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*ESPhoneNums.ESID references ES.UID*

**EE** (UID, Schedule)

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*EE.UID references User.UID*

**EEPhoneNums** (EEID, Phone)

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*EEPhoneNums.EEID references EE.UID*

**TA** (UID, Schedule)

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*TA.UID references User.UID*

**TAPhoneNums** (TAID, Phone)

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*TAPhoneNums.TAID references TA.UID*

**Coordinator** (UID)

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*Coordinator.UID references User.UID*

**CoordinatorPhoneNums** (CoordinatorID, Phone)

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*CoordinatorPhoneNums.CoordinatorID references Coordinator.UID*

**Student** (UID, first\_name, last\_name, Date\_Of\_Birth, Address, *Age*, Semester, GPA, *TBG*, *CPG*)

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*Student.UID references User.UID*

*Where : Student.Age = current date – Student.Date\_Of\_Birth,*

*TBG = calculated,*

*CPG = calculated total progress reports grades*

**StudentPhoneNums** (StudentID, Phone)

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*StudentPhoneNums.StudentID references Student. UID*

**Bachelor\_Project** (Code, Name, Sub\_Material, Description)

**Bachelor\_Resources** (Code, Resource)

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*Bachelor\_Resources.Code references Bachelor\_Project.Code*

**Bachelor\_Sub\_Materials** (Code, Material)

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*Bachelor\_Sub\_Materials.Code references Bachelor\_Project.Code*

**Abroad** (ACode, Country, Institution)

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*Abroad.ACode references Bachelor\_Project.Code*

**Local** (LCode)

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*Local.LCode references Bachelor\_Project.Code*

**Academic** (ALCode)

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*Academic.ALCode references Local.LCode*

**Industrial** (ILCode)

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*Industrial.ILCode references Local.LCode*

**Faculty** (Faculty Code, Name, Dean)

**Major** (Maior Code, Faculty Code, Major\_Name)

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*Major. Faculty\_Code references Faculty*

**Cluster** (ID, Field\_Name, Description)

**Meeting** (Lecturer ID, MeetingID, STime, ETime, *Duration*, Date, Meeting\_Point)

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*Meeting.LecturerID references Lecturer.UID*

*Where : Meeting.Duration = Meeting.ETime – Meeting.STime*

**MeetingToDoList** (LecturerID, MeetingID, ToDoList)

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*MeetingToDoList.(LecturerID,MeetingID) references Meeting*

**MeetingAttendentsEmail** (LecturerID, MeetingID, Email)

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*MeetingAttendentsEmail.(LecturerID,MeetingID) references Meeting*

**MeetingPhoneNums** (LecturerID, MeetingID, Phone)

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*MeetingPhoneNums.(LecturerID,MeetingID) references Meeting*

**Hardware** (Code, Name, Type, NOAC, NOUC, NONC)

**Thesis** (StudentID, Title, Deadline, PDF\_Doc, *Total\_Grade*)

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*Thesis.StudentID references Student.UID*

*Where : Thesis.Total\_Grade = Calculated (LecAndEEGradeThesis.EEGrade & LecAndEEGradeThesis.LecGrade) OR  
(CompAndEmployeeGradeThesis.CompGrade & CompAndEmployeeGradeThesis.EmplGrade)*

**Defense** (StudentID, Content, Time, Location, Date, *Total\_Grade*)

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*Defense.StudentID references Student.UID*

*Where : Defense.Total\_Grade = Calculated ((LecAndEEGradeDefense.EEGrade + LecAndEEGradeDefense.LecGrade)/2) OR  
(CompAndEmployeeGradeDefense.CompGrade & CompAndEmployeeGradeDefense.EmplGrade)*

**ProgressReport** (StudentID, Content, Date, *Grade*)

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*ProgressReport.StudentID references Student.UID*

*Where : ProgressReport.Grade = Calculated (LecGradeProgReport.LecGrade) OR  
(LecAndCompGradeProgReport.CompGrade & LecAndCompGradeProgReport.LecGrade)*

**LecturerHasFaculty** (LecturerID, FacultyCode)

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*LecturerhasFaculty.LecturerID references Lecturer*

*LecturerhasFaculty.FacultyCode references Faculty*

**Company\_Assigns**(Company\_ID, Employee\_ID, Employee\_CID, Industrial\_ID)

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*Company\_Assigns.Company\_ID references Company.UID*

*Company\_Assigns.( Employee\_ID, Employee\_CID )references Employee*

*Company\_Assigns.Industrial\_ID references Industrial.ILCode*

**EmpGradesStud** (CompanyID, StaffID, StudentID, EmployeeGrade)

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*EmpGradesStud.(CompanyID, StaffID) references Employee*

*EmpGradesStud.StudentID references Student.UID*

**LectureAndCompanyGradeProgressReport** (LecturerID, CompanyID, StudentID, Content, CompGrade, LecGrade)

*LecAndCompGradeProgReport.LecturerID references Lecturer.UID*

*LecAndCompGradeProgReport.CompanyID references Company.UID*

*LecAndCompGradeProgReport.(StudentID,content) references ProgressReport*

**LecAndEEGradeThesis** (LecturerID, EEID, StudentID, Title, EEGrade, LecGrade)

*LecAndEEGradeThesis.LecturerID references Lecturer.UID*

*LecAndEEGradeThesis.EEID references EE.UID*

*LecAndEEGradeThesis.( StudentID, Title ) references Thesis*

**LecAndEEGradeDefense** (LecturerID, EEID, StudentID, Content, EEGrade, LecGrade)

*LecAndEEGradeDefense.LecturerID references Lecturer.UID*

*LecAndEEGradeDefense.EEID references EE.UID*

*LecAndEEGradeDefense.(StudentID,content) references Defense*

**LecGradeProgReport** (LecturerID, StudentID, Content, LecGrade)

*LecGradeProgReport.LecturerID references Lecturer.UID*

*LecGradeProgReport.(StudentID,content) references ProgressReport*

**CompAndEmployeeGradeThesis** (CompanyID, EmpCompanyID, StaffID, StudentID, Title, CompGrade, EmplGrade)

*CompAndEmployeeGradeThesis.CompanyID references Company.UID*

*CompAndEmployeeGradeThesis.(EmpCompanyID,staffID) references Employee*

*CompAndEmployeeGradeThesis.( StudentID, Title) references Thesis*

**CompAndEmployeeGradeDefense** (CompanyID, EmpCompanyID, StaffID, StudentID, Content, CompGrade, EmplGrade)

*CompAndEmployeeGradeDefense.CompanyID references Company.UID*

*CompAndEmployeeGradeDefense.(EmpCompanyID,staffID) references Employee*

*CompAndEmployeeGradeDefense.(StudentID,content) references Defense*

**LecRecommendEELocalBac** (Lec\_ID, LocalBachelor Code, EEID)

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*LecRecommendEELocalBac.lec\_id references Lecture*

*LecRecommendEELocalBac.LocalBachelorCode references LocalBachelor*

*LecRecommendEELocalBac.EEID references EE*

**ESUpdateAbroad** (AboradBachelorCode, ESID)

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*ESUpdateAbroad.AboradBachelorCode references Abroad*

*ESUpdateAbroad.ESID references ES*

**TAHasFaculty** (TAID, Faculty\_code)

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*TAHasFaculty.TAID referenecs TA*

*TAHasFaculty.Faculty\_Code referenecs faculty*

**CoordHasFaculty** (CoordinatorID, Faculty\_Code)

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*CoordHasFaculty.CoordinatorID references Coordinator*

*CoordHasFaculty.Faculty\_code references Faculty*

**TAUpdateProgressReport** (TAID, Content ,StudentID)

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*TAUpdateProgressReport.TAID refernces TA*

*TAUpdateProgressReport.(Content, StudentID) refernces ProgressReport*

**CoordinatorAddsEE** (CoordinatorID, EEID)

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*CoordinatorAddsEE.CoordinatorID reference Coordinator*

*CoordinatorAddsEE.EEID reference EE*

**CoordinatorAssignsEEToBachelor\_Project** (CoordinatorID, EEID, BachelorProjectCode, EEgrade)

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*CoordinatorAssignsEEToBachelor\_Project.CoordinatorID references Coordinator*

*CoordinatorAssignsEEToBachelor\_Project.EEID references EE*

*CoordinatorAssignsEEToBachelor\_Project. BachelorProjectCode references Bachelor\_Project*

**ESGradesStudents** (ESID, StudentID)

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*ESGradesStudents.StudentID references Student*

*ESGradesStudents. ESID references ES*

**CoordAssignsTALocalBachelorProject** (CoordinatorID, TAID, LocalBachelorProjectCode)

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*CoordAssignsTALocalBachelorProject.CoordinatorID references Coordinator*

*CoordAssignsTALocalBachelorProject.TAID references TA*

*CoordAssignsTALocalBachelorProject.LocalBachelorProjectCode references Local*

**Faculty\_Has\_Student** (SID, Faculty Code)

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*Faculty\_Has\_Student . SID REFERENCES Student*

*Faculty\_Has\_Student . Faculty\_Code REFERENCES Faculty*

**Student\_Enroll\_Major** (SID, Major\_Code, Faculty\_code)

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*Student\_Enroll\_Major.SID REFERENCES Student*

*Student\_Enroll\_Major(Major\_Code,Faculty\_code) REFERENCES Major*

**Student\_Preferences\_BB** (SID, Code, Preference Number)

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*Student\_Preferences\_BB.SID REFERENCES Student*

*Student\_Preferences\_BB. Code REFERENCES Bachelor\_Project*

**Major\_Has\_Bachelor\_Project** (Major Code, Faculty\_code Code)

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*Major\_Has\_Bachelor\_Project.(Major Code,Faculty\_code) REFERENCES Major*

*Major\_Has\_Bachelor\_Project.Code REFERENCES Bachelor\_Project*

**Coo\_Schedule\_Defense**(Content, SID, Co-ID)

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*Coo\_Schedule\_Defense.(Content,SID) REFERENCES Defense*

*Coo\_Schedule\_Defense.Co-ID REFERENCES Coordinator*

**Lecturer\_Creates\_Cluster** (ClusterID,LecturerID)

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*Lecturer\_Creates\_Cluster.LecturerID REFERENCES Lecturer*

*Lecturer\_Creates\_Cluster.ClusterID REFERENCES Cluster*

**BP\_Has\_Cluster** (ClusterID,BachelorProjectID)

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*BP\_Has\_Cluster.BachelorProjectID REFERENCES BacjelorProject*

*BP\_Has\_Cluster.ClusterID REFERENCES Cluster*

**Company\_Creates\_BP** (CompanyID,BachelorProjectID)

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*Comapny\_Creates\_BP.BachelorProjectID REFERENCES BacjelorProject*

*Comapny\_Creates\_BP.Company REFERENCES Company*

**Lecturer\_Supevises\_LocalBP** (LocalBP,LecID)

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*Lecturer\_Supervises\_LocalBP.LocalBP REFERENCES LocalBacjelorProject*

*Lecturer\_Supervises\_LocalBP.LecID REFERENCES Lecturer*

**Company\_Registers\_Employee** (CompanyID,StaffID,EmployeeComapnyID)

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*Company\_Registers\_Employee.Company REFERENCES Company*

*Company\_Registers\_Employee.(StaffID,EmployeeCompanyID) REFERENCES Employee*

**Employee\_Fills\_Progress\_Report** (Content, SID,StaffID,EmployeeComapnyID)



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*Employee\_Fills\_Progress\_Report.(Content,SID) REFERENCES Progress\_Report*

*Employee\_Fills\_Progress\_Report.( EmployeeComapnyID , StaffID) REFERENCES Employee*

**Student\_Books\_Meeting** (MeetingID,LectureID,SID)

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*Student\_Books\_Meeting.(LecturerID,MeetingID) references Meeting*

*Student\_Books\_Meeting.SID REFERENCES Student*

**TA\_AssignedTo\_Meeting** (TAID,MeetingID, LectureID,)

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*TA\_AssignedTO\_Meeting .(LecturerID,MeetingID) references Meeting*

*TA\_AssignedTO\_Meeting.TAID REFERENCES TA*

**User\_Modify/Add\_HardWare** (UID,Code)

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*User\_Modify/Add\_HardWare.UID REFERENCES User*

*User\_Modify/Add\_HardWare.Code REFERENCES HardWare*

**Lec\_Fills\_ProgressReport**(LID, Content, SID)

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*Lec\_Fills\_ProgressReport.LID references Lecturer*

*Lec\_Fills\_ProgressReport.(Content,SID) references ProgressReport*