

UNF

Project(ID, sponsor, start time, end time , budget)

Professor_led_Project(projectID,professorID)

Professor(ID, name, area, rank,labID)

Lab(ID, name, location)

Course(ID, year, name,professorID,evalID)

GraduateStudent(ID, name, degree,program,labID,professorID,evalID)

GradStudent_apply_Course(gradID,courseID)

UndergraduateStudent(ID,name,class,program,evalID)

Undergrad_apply_course(undergradID,courseID)

GradStudent_obligatory_Course(gradID,courseID)

Undergrad_elective_course(undergradID,courseID)

AddressBook(student ID, address, email, phone number ,Line ID)

AddressBook_contain_GradStudent(student ID,gradID)

AddressBook_contain_Undergrad(student ID,undergradID)

Evaluation(student ID,comsyllabusplete)

1NF

Project(ID, sponsor, start time, end time , budget) 一個 project 可能有多個 sponsor

Professor_led_Project(projectID,professorID)

Professor(ID, name, area, rank,labID)

Lab(ID, name, location)

Course(ID, year, name, professorID,evalID)

GraduateStudent(ID, name, degree,program,labID,professorID,evalID) 研究生可能有多個 program

GradStudent_apply_Course(gradID,courseID)

UndergraduateStudent(ID,name,class,program,evalID) 一個大學生可能有多個 program 和 class

Undergrad_apply_course(undergradID,courseID)

GradStudent_obligatory_Course(gradID,courseID)

Undergrad_elective_course(undergradID,courseID)

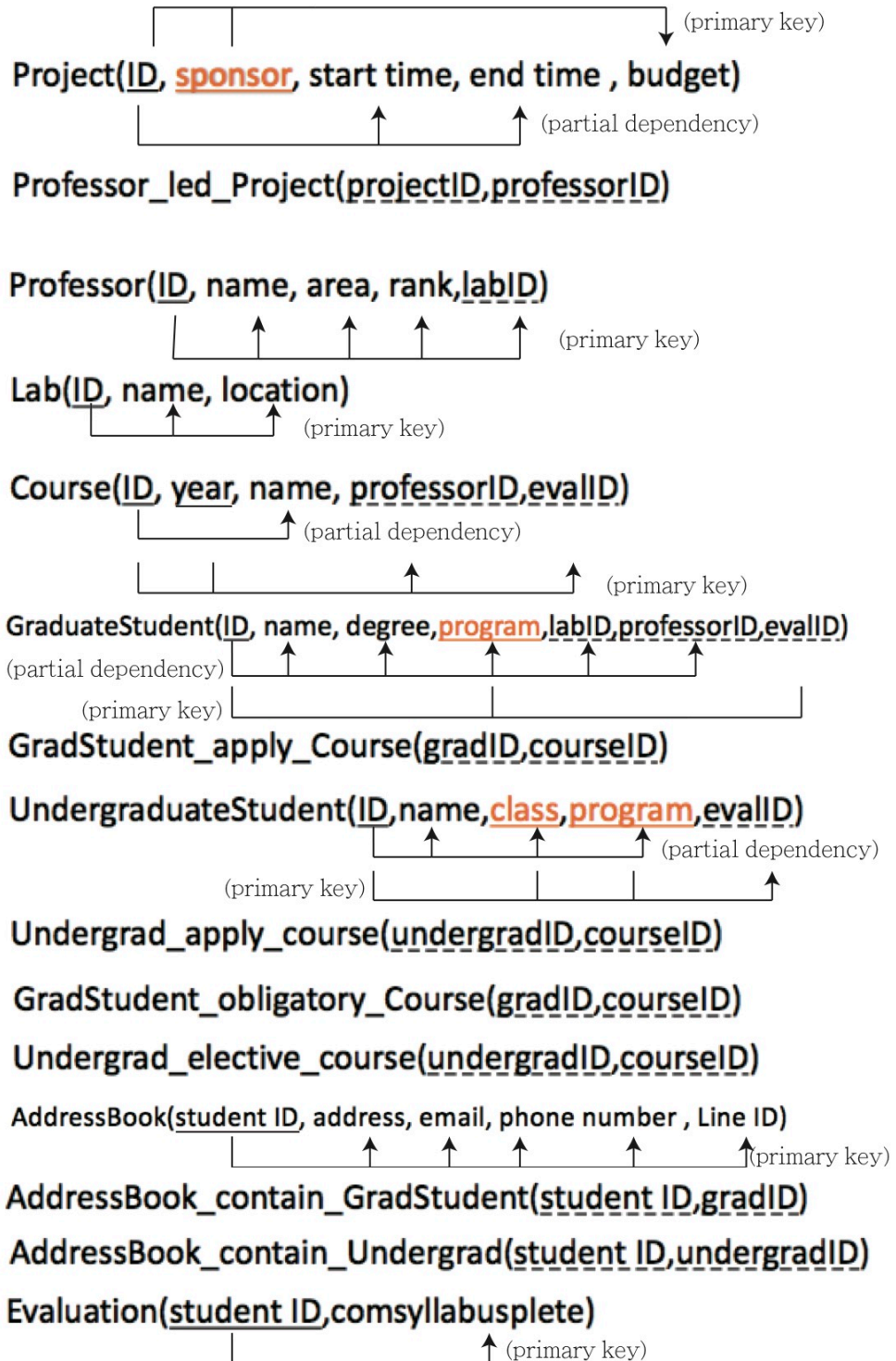
AddressBook(student ID, address, email, phone number , Line ID)

AddressBook_contain_GradStudent(student ID,gradID)

AddressBook_contain_Undergrad(student ID,undergradID)

Evaluation(student ID,comsyllabusplete)

Functional Dependency



2NF

Project_1(ID,start time,end time)

Project_2(ID,sponsor,budget)

Professor_led_Project(projectID,professorID)

Professor(ID, name, area, rank,labID)

Lab(ID, name, location)

Course_1(ID,name)

Course_2(ID,year,professorID,evalID)

GraduateStudent_1(ID, name, degree,program,labID,professorID)

GraduateStudent_2(ID,program,evalID)

GradStudent_apply_Course(gradID,courseID)

UndergraduateStudent_1(ID,name,class,program)

UndergraduateStudent_2(ID,class,program,evalID)

Undergrad_apply_course(undergradID,courseID)

GradStudent_obligatory_Course(gradID,courseID)

Undergrad_elective_course(undergradID,courseID)

AddressBook_contain_GradStudent(student ID,gradID)

AddressBook_contain_Undergrad(student ID,undergradID)

Evaluation(student ID,comsyllabusplete)

以上都沒有遞移相依

3NF

Project_1(ID,start time,end time)

Project_2(ID,sponsor,budget)

Professor_led_Project(projectID,professorID)

Professor(ID, name, area, rank,labID)

Lab(ID, name, location)

Course_1(ID,name)

Course_2(ID,year,professorID,evalID)

GraduateStudent_1(ID, name, degree,program,labID,professorID)

GraduateStudent_2(ID,program,evalID)

GradStudent_apply_Course(gradID,courseID)

UndergraduateStudent_1(ID,name,class,program)

UndergraduateStudent_2(ID,class,program,evalID)

Undergrad_apply_course(undergradID,courseID)

GradStudent_obligatory_Course(gradID,courseID)

Undergrad_elective_course(undergradID,courseID)

AddressBook_contain_GradStudent(student ID,gradID)

AddressBook_contain_Undergrad(student ID,undergradID)

Evaluation(student ID,comsyllabusplete)
