COMP3350- Database Documentation
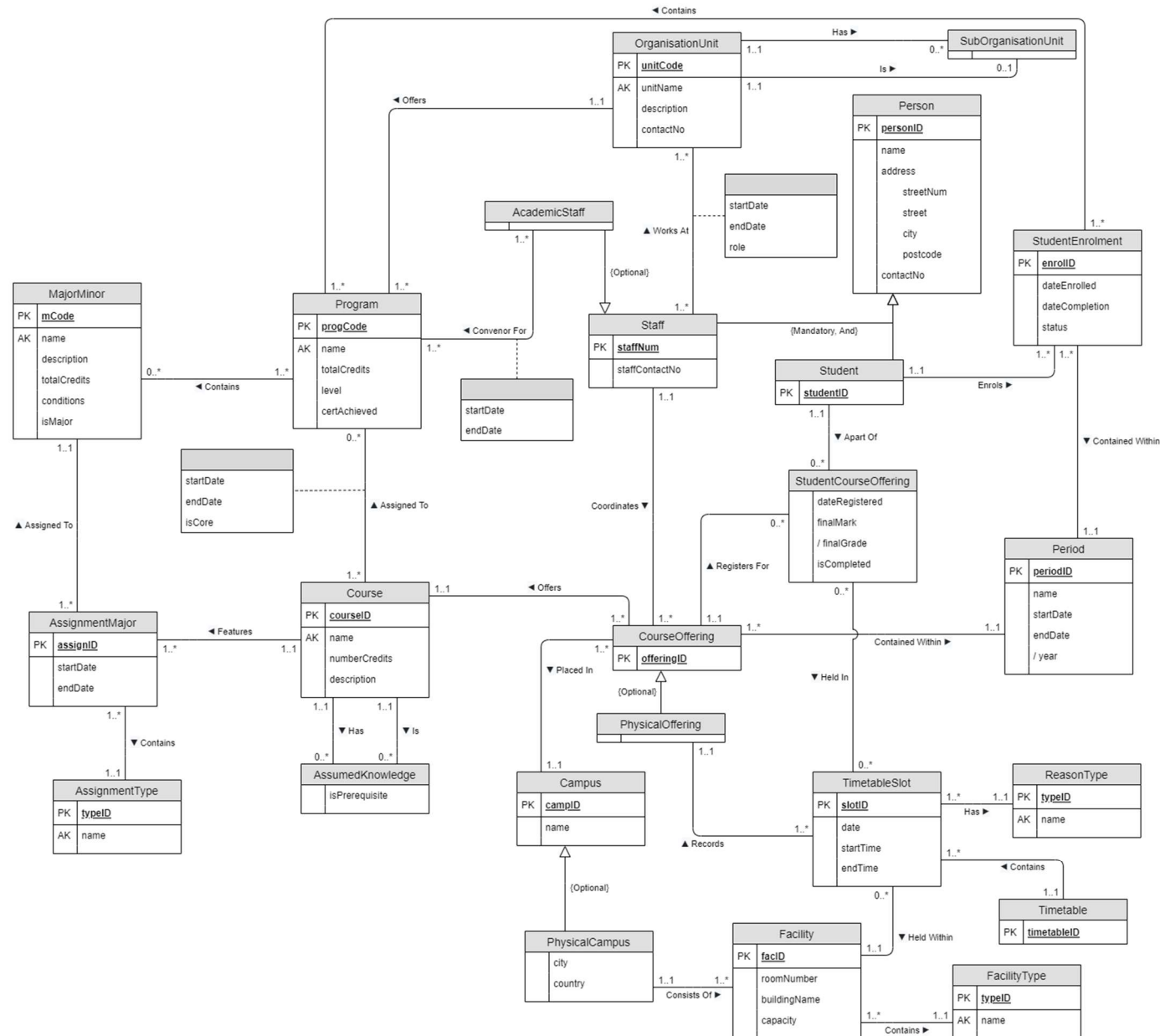
Nathan Murphy - 3187332
Jesse Lecathelinais - 3331357

Assumptions

- A staff member can be a student
  - The staff number AND student number of a person with both, references the same number (person ID)
- A staff member can't be enrolled in a course offering as a student that they are coordinating
- If a student drops out of course offering, it will be deleted.
- Students can enroll in as many courses as they want for each period (IE Semester/Trimester)
- Students can enroll in a course even if they haven't completed the assumed knowledge, however if its flagged as a Prerequisite you must have completed
- An invalid student number entered into the system when registering for courses.
- An invalid course number can be entered into the system when registering for courses.
- A student who fails a course, doesn't complete the course

EER Database Model

Relational Schema

OrganisationUnit(unitCode, unitName, description, contactNo)
Primary Key unitCode
Alternative Key unitName

SubOrgisationUnit(oUnit, subOUnit)
Primary Key oUnit, subOUnit
Foreign Key oUnit **References** OrganisationUnit(unitCode) *ON UPDATE NO ACTION ON DELETE NO ACTION*
Foreign Key subOUnit **References** OrganisationUnit(unitCode) *ON UPDATE NO ACTION ON DELETE NO ACTION*

AssignmentType(typeID, name)
Primary Key typeID
Alternative Key name

MajorMinor(mCode, name, description, totalCredits, conditions, isMajor)
Primary Key mCode
Alternative Key name

Course(courseID, name, numberCredits, description)
Primary Key courseID
Alternative Key name

AssumedKnowledge(course, assumedCourse, isPrerequisite)
Primary Key course, assumedCourse
Foreign Key course **References** Course(courseID) *ON UPDATE NO ACTION ON DELETE NO ACTION*
Foreign Key assumedCourse **References** Course(courseID) *ON UPDATE NO ACTION ON DELETE NO ACTION*

Program(progCode, name, oUnit, totalCredits, level, certAchieved)
Primary Key progCode
Alternative Key name
Foreign Key oUnit **References** OrganisationUnit(unitCode) *ON UPDATE NO ACTION ON DELETE NO ACTION*

ProgramCourse(program, course, startDate, endDate, isCore)
Primary Key program, course, startDate
Foreign Key program **References** Program(progCode) *ON UPDATE NO ACTION ON DELETE NO ACTION*
Foreign Key course **References** Course(courseID) *ON UPDATE NO ACTION ON DELETE NO ACTION*

Person(personID, name, isStaff, isStudent, streetNum, street, city, postcode, contactNo, staffContact)
Primary Key personID
Alternative Key personID, isStaff
Alternative Key personID, isStudent

AcademicStaff(staff, isStaff)
Primary Key staff
Foreign Key staff, isStaff **References** Person(personID, isStaff) *ON UPDATE CASCADE ON DELETE NO ACTION*

OrganisationStaff(oUnit, staff, isStaff, startDate, endDate, role)
Primary Key oUnit, staff, startDate
Foreign Key oUnit **References** OrganisationUnit(unitCode) *ON UPDATE CASCADE ON DELETE NO ACTION*
Foreign Key staff, isStaff **References** Person(personID, isStaff) *ON UPDATE CASCADE ON DELETE NO ACTION*

ProgramStaff(program, convenor, startDate, endDate)
Primary Key program, convenor, startDate
Foreign Key program **References** Program(progCode) *ON UPDATE CASCADE ON DELETE NO ACTION*
Foreign Key convenor **References** AcademicStaff(staff) *ON UPDATE CASCADE ON DELETE NO ACTION*

ProgramMajorMinor(program, majorMinor)
Primary Key program, majorMinor
Foreign Key program **References** Program(progCode) *ON UPDATE CASCADE ON DELETE NO ACTION*
Foreign Key majorMinor **References** MajorMinor(mCode) *ON UPDATE CASCADE ON DELETE NO ACTION*

AssignmentMajor(assignID, majorMinor, course, type, startDate, endDate)
Primary Key assignID
Foreign Key majorMinor **References** MajorMinor(mCode) *ON UPDATE CASCADE ON DELETE NO ACTION*
Foreign Key course **References** Course(courseID) *ON UPDATE CASCADE ON DELETE NO ACTION*
Foreign Key type **References** AssignmentType(typeID) *ON UPDATE CASCADE ON DELETE NO ACTION*

Campus(campID, name)
Primary Key campID

PhysicalCampus(campID, city, country)
Primary Key campID
Foreign Key campID **References** Campus(campID) *ON UPDATE NO ACTION ON DELETE NO ACTION*

FacilityType(typeID, name)
Primary Key typeID
Alternative Key name

Facility(facID, campus, roomNumber, buildingName, capacity, type)
Primary Key facID
Alternative Key campus, rooNumber, buildingName
Foreign Key campus **References** PhysicalCampus(campID) *ON UPDATE NO ACTION ON DELETE NO ACTION*
Foreign Key type **References** FacilityType(typeID) *ON UPDATE NO ACTION ON DELETE NO ACTION*

Period(periodID, name, startDate, endDate, year)
Primary Key periodID
Derived year (startDate)

CourseOffering(offeringID, course, coordinator, isStaff, campus, period)
Primary Key offeringID
Foreign Key course References Course(courseID) *ON UPDATE NO ACTION ON DELETE NO ACTION*
Foreign Key coordinator, isStaff **References** Person(personID, isStaff) *ON UPDATE NO ACTION ON DELETE NO ACTION*
Foreign Key campus **References** Campus(campID) *ON UPDATE NO ACTION ON DELETE NO ACTION*
Foreign Key period **References** Period(periodID) *ON UPDATE NO ACTION ON DELETE NO ACTION*

StudentCourseOffering(student, isStudent, offering, dateRegistered, finalMark, finalGrade, isCompleted)
Primary Key student, offering
Foreign Key student, isStudent **References** Person(personID, isStudent) *ON UPDATE CASCADE ON DELETE NO ACTION*
Foreign Key offering **References** CourseOffering(offeringID) *ON UPDATE CASCADE ON DELETE NO ACTION*
Derived finalGrade (finalMark)

PhysicalOffering(offeringID)
Primary Key offeringID
Foreign Key offeringID **References** CourseOffering(offeringID) *ON UPDATE CASCADE ON DELETE NO ACTION*

ReasonType(typeID, name)
Primary Key typeID
Alternative Key name

TimetableSlot(slotID, facility, offering, staff, isStaff, date, startTime, endTime, reason)
Primary Key slotID
Alternative Key slotID, offering
Foreign Key facility **References** Facility(facID) *ON UPDATE NO ACTION ON DELETE NO ACTION*
Foreign Key offering **References** PhysicalOffering(offeringID) *ON UPDATE NO ACTION ON DELETE NO ACTION*
Foreign Key reason **References** ReasonType(typeID) *ON UPDATE NO ACTION ON DELETE NO ACTION*
Foreign Key staff, isStaff **References** Person(personID, isStaff) *ON UPDATE NO ACTION ON DELETE NO ACTION*

StudentTimetableSlot(student, offering, slot)
Primary Key student, slot, offering
Foreign Key student, offering **References** StudentCourseOffering(student, offering) *ON UPDATE NO ACTION ON DELETE NO ACTION*
Foreign Key slot, offering **References** TimetableSlot(slotID, offering) *ON UPDATE NO ACTION ON DELETE NO ACTION*

StudentEnrolment(enrolID, student, isStudent, period, dateEnrolled, dateCompletion, status)
Primary Key enrolID
Foreign Key student, isStudent **References** Person(personID, isStudent) *ON UPDATE CASCADE ON DELETE NO ACTION*
Foreign Key period **References** Period(periodID) *ON UPDATE CASCADE ON DELETE NO ACTION*

ProgramEnrolment(enrolID, program)
Primary Key enrolID, program
Foreign Key enrolID **References** StudentEnrolment(enrolID) *ON UPDATE CASCADE ON DELETE NO ACTION*
Foreign Key program **References** Program(progCode) *ON UPDATE CASCADE ON DELETE NO ACTION*