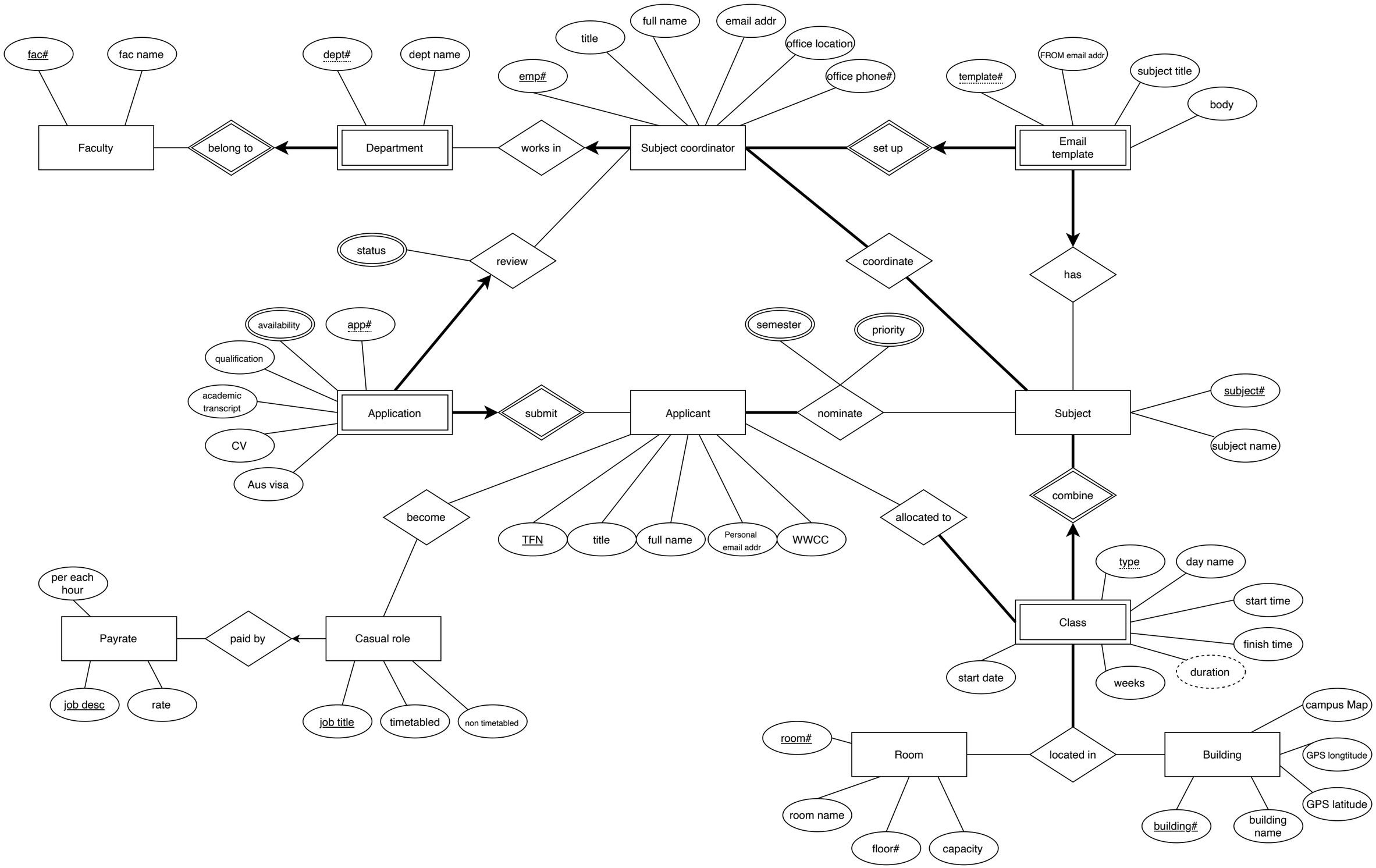
TITRS Conceptual Model & Physical ER Model



Faculty

Subject Coordinator

Application

Causal Roles

Class

Faculty
- FacultyNum TINYINT(8)
- FacultyName VARCHAR(50)
- Indexes

Belong to

Department
- Faculty_FacultyNum TINYINT(8)
- DepartmentNum TINYINT(140)
- DepartmentName VARCHAR(50)
- Indexes

Works in

SubjectCoordinator
- EmployeeNum INT
- Title ENUM(...)
- FirstName VARCHAR(15)
- MiddleName VARCHAR(15)
- LastName VARCHAR(15)
- EmailAddr VARCHAR(50)
- OfficeAddrLine1 VARCHAR(100)
- OfficeAddrLine2 VARCHAR(100)
- PostCode INT
- OfficePhoneNum INT
- Department_Faculty_FacultyNum TINYINT(8)
- Department_DepartmentNum TINYINT(140)
- Indexes

Set up

EmailTemplate
- SubjectCoordinator_EmployeeNum INT
- SubjectCoordinator_Department_Faculty_FacultyNum TINYINT(8)
- SubjectCoordinator_Department_DepartmentNum TINYINT(140)
- FROMEmailAddr VARCHAR(50)
- Body LONGTEXT
- Subject_SubjectCode INT
- Indexes

Coordinate

Coordination
- SubjectCoordinator_EmployeeNum INT
- Subject_SubjectCode INT
- Indexes

Outcome

Status
- Status ENUM(...)
- SubjectCoordinator_EmployeeNum INT
- Application_ApplicationNum INT
- Application_Applicants_TFN INT(9)
- Indexes

Is coordiated by

Has

Availability
- DayName ENUM(...)
- BeginningHour TIME
- FinishHour TIME
- Indexes

Is nominated

TimePriority
- Availability_DayName ENUM(...)
- Availability_BeginningHour TIME
- Availability_FinishHour TIME
- Preference ENUM(...)
- Application_ApplicationNum INT
- Application_Applicants_TFN INT(9)
- Indexes

Specify

Application
- ApplicationNum INT
- Qualification ENUM(...)
- Transcript MEDIUMTEXT
- CV MEDIUMTEXT
- VisaInfo VARCHAR(50)
- Applicants_TFN INT(9)
- Indexes

Outcome

Submit

Applicants
- TFN INT(9)
- Title ENUM(...)
- FirstName VARCHAR(15)
- MiddleName VARCHAR(15)
- LastName VARCHAR(15)
- PersonalEmail VARCHAR(50)
- WWCC VARCHAR(20)
- Indexes

Nominate

Nomination
- Applicants_TFN INT(9)
- Subject_SubjectCode INT
- Semester ENUM(...)
- Preference ENUM(...)
- Indexes

Is nominated

Subject
- SubjectCode INT
- SubjectName VARCHAR(20)
- Indexes

Is offered

Is offered

OfferNonTimetabled
- Applicants_TFN INT(9)
- NonTimetabledPayRate_AcadActPerHour VARCHAR(100)
- NonTimetabledPayRate_Qualification ENUM(...)
- Indexes

Is paid by

NonTimetabledPayRate
- AcadActPerHour VARCHAR(100)
- Qualification ENUM(...)
- RatePerHour DECIMAL(5,2)
- Indexes

OfferTimeTabled
- Applicants_TFN INT(9)
- TimetabledPayRate_ClassType VARCHAR(20)
- TimetabledPayRate_IntialOrRepeat TINYINT(1)
- TimetabledPayRate_JobDescPerHour VARCHAR(30)
- TimetabledPayRate_Qualification ENUM(...)
- Indexes

Is paid by

TimetabledPayRate
- ClassType VARCHAR(20)
- IntialOrRepeat TINYINT(1)
- JobDescPerHour VARCHAR(30)
- Qualification ENUM(...)
- RatePerHour DECIMAL(5,2)
- Indexes

Is allocated to

ClassTime
- StartTime TIME
- EndTime TIME
- [Duration] TIME
- Indexes

Belong to

ClassDate
- Date TIMESTAMP
- Day ENUM(...)
- CalendarWeek INT
- Indexes

Belong to

Time
- Class_ClassCode CHAR(15)
- Class_Subject_SubjectCode INT
- ClassTime_StartTime TIME
- ClassTime_EndTime TIME
- ClassDate_Date TIMESTAMP
- Indexes

Is Scheduled on

Consists of

Allocation
- Applicants_TFN INT(9)
- Class_ClassCode CHAR(15)
- Class_Subject_SubjectCode INT
- Indexes

Is taken by

Class
- ClassCode CHAR(15)
- ClassType VARCHAR(20)
- Subject_SubjectCode INT
- Indexes

Located in

ClassRoom
- RoomNum INT
- RoomName VARCHAR(100)
- Floor ENUM(...)
- SeatCapacity INT
- Indexes

Locate in

Venue
- Class_ClassCode CHAR(15)
- Class_Subject_SubjectCode INT
- ClassRoom_RoomNum INT
- Building_BuildingNum INT
- Indexes

Locate in

Building
- BuildingNum INT
- BuildingName VARCHAR(100)
- GPS(Latitude) DOUBLE
- GPS(Longtitude) DOUBLE
- CampusMap LONGBLOB
- Indexes

Assumption:

- We assume each application only for one nominated subject.

Work Breakdown:

Students Information

Group_21	
Full Name	**Student ID**
Jiayi Li	1097419
Keyu Liao	1047755
Shangen He	1117311
Tianyang Wang	1193991

Workload

Student	Individual Task	Teamwork	Contribution
Tianyang Wang	• Summarizing case key points	• Case analysis • Discuss and confirm the entities, attributes, relationships and constraints etc. • Discuss and confirm the framework of model design • Discuss and determine the data type • Determine and normalize the relations	100%
Keyu Liao	• Conceptual Modelling		100%
Jiayi Li	• Physical ER Modelling		100%
Shangen He	• Checking, reviewing and correcting mistakes		100%