Section 4. Logical Database Design
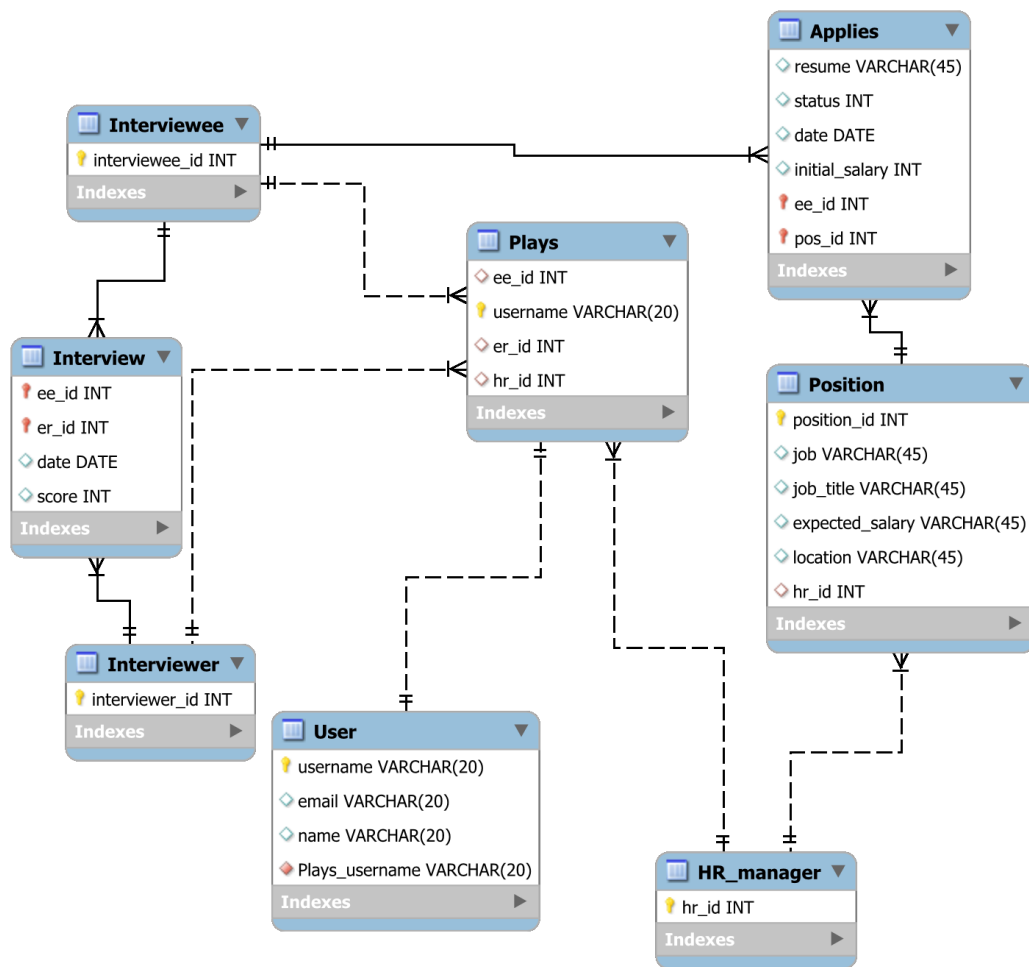## Section 4.1 Entity Relationship Diagram (using Dia)
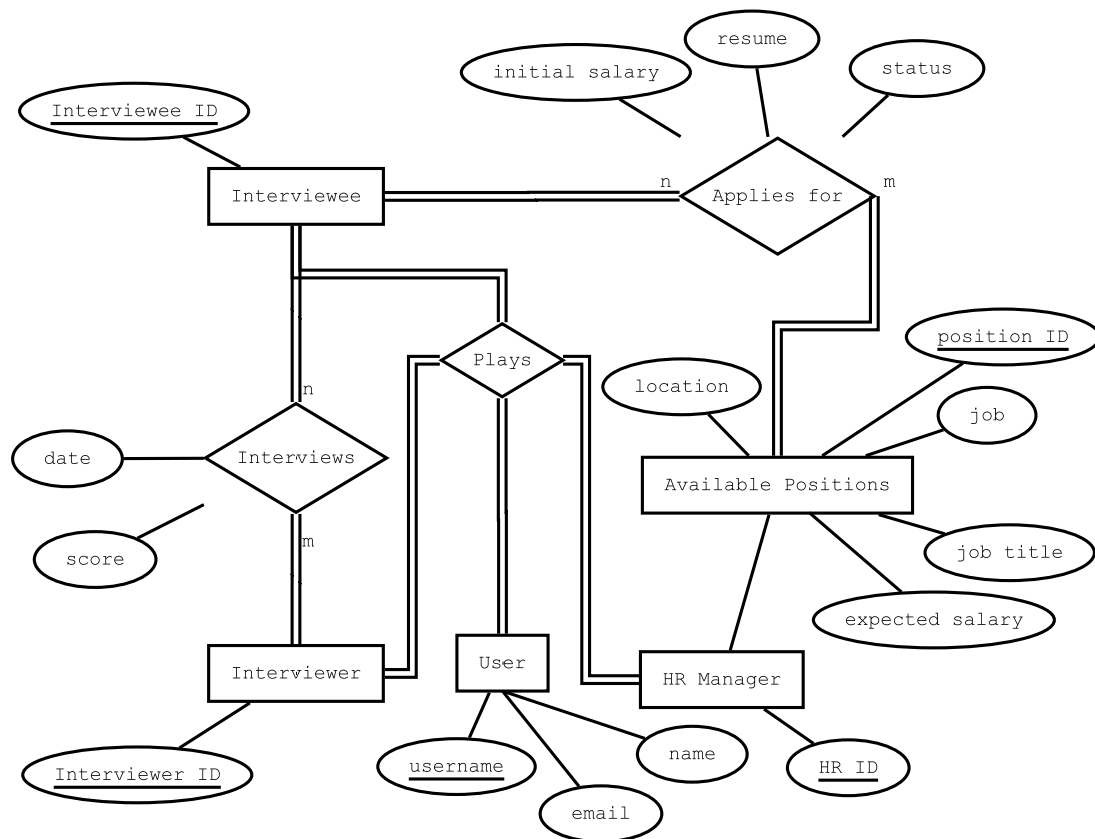
Section 4.2 Logical Database Design (using MySQL Workbench)

Interviewee ▼
🔑 interviewee_id INT
Indexes ▶

Applies ▼
◇ resume VARCHAR(45)
◇ status INT
◇ date DATE
◇ initial_salary INT
🔑 ee_id INT
🔑 pos_id INT
Indexes ▶

Plays ▼
◇ ee_id INT
🔑 username VARCHAR(20)
◇ er_id INT
◇ hr_id INT
Indexes ▶

Interview ▼
🔑 ee_id INT
🔑 er_id INT
◇ date DATE
◇ score INT
Indexes ▶

Position ▼
🔑 position_id INT
◇ job VARCHAR(45)
◇ job_title VARCHAR(45)
◇ expected_salary VARCHAR(45)
◇ location VARCHAR(45)
◇ hr_id INT
Indexes ▶

Interviewer ▼
🔑 interviewer_id INT
Indexes ▶

User ▼
🔑 username VARCHAR(20)
◇ email VARCHAR(20)
◇ name VARCHAR(20)
◆ Plays_username VARCHAR(20)
Indexes ▶

HR_manager ▼
🔑 hr_id INT
Indexes ▶

Section 4.3 Database Schema (A system generated list of tables with attributes and constraints)

-- MySQL Script generated by MySQL Workbench

-- Sun May 13 11:29:26 2018

-- Model: New Model   Version: 1.0

-- MySQL Workbench Forward Engineering

SET @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0;

SET   @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS,
FOREIGN_KEY_CHECKS=0;

SET   @OLD_SQL_MODE=@@SQL_MODE,
SQL_MODE='TRADITIONAL,ALLOW_INVALID_DATES';

-- ---
-- Schema HR_Migration_System
-- ---

-- ---

```
-- Schema HR_Migration_System
-- -----------------------------------------------------
CREATE SCHEMA IF NOT EXISTS `HR_Migration_System` DEFAULT CHARACTER SET utf8 ;
USE `HR_Migration_System` ;


-- -----------------------------------------------------
-- Table `HR_Migration_System`.`Interviewee`
-- -----------------------------------------------------
DROP TABLE IF EXISTS `HR_Migration_System`.`Interviewee` ;

CREATE TABLE IF NOT EXISTS `HR_Migration_System`.`Interviewee` (
    `interviewee_id` INT NOT NULL AUTO_INCREMENT,
    PRIMARY KEY (`interviewee_id`),
    UNIQUE INDEX `interviewee_id_UNIQUE` (`interviewee_id` ASC))
ENGINE = InnoDB;



-- -----------------------------------------------------
-- Table `HR_Migration_System`.`Interviewer`
-- -----------------------------------------------------
DROP TABLE IF EXISTS `HR_Migration_System`.`Interviewer` ;

CREATE TABLE IF NOT EXISTS `HR_Migration_System`.`Interviewer` (
    `interviewer_id` INT NOT NULL AUTO_INCREMENT,
    PRIMARY KEY (`interviewer_id`),
    UNIQUE INDEX `interviewer_id_UNIQUE` (`interviewer_id` ASC))
ENGINE = InnoDB;



-- -----------------------------------------------------
-- Table `HR_Migration_System`.`HR_manager`
-- -----------------------------------------------------
DROP TABLE IF EXISTS `HR_Migration_System`.`HR_manager` ;

CREATE TABLE IF NOT EXISTS `HR_Migration_System`.`HR_manager` (
    `hr_id` INT NOT NULL AUTO_INCREMENT,
    PRIMARY KEY (`hr_id`),
    UNIQUE INDEX `hr_id_UNIQUE` (`hr_id` ASC))
ENGINE = InnoDB;



-- -----------------------------------------------------
-- Table `HR_Migration_System`.`Position`
-- -----------------------------------------------------
```

```sql
DROP TABLE IF EXISTS `HR_Migration_System`.`Position` ;

CREATE TABLE IF NOT EXISTS `HR_Migration_System`.`Position` (
  `position_id` INT NOT NULL,
  `job` VARCHAR(45) NULL,
  `job_title` VARCHAR(45) NULL,
  `expected_salary` VARCHAR(45) NULL,
  `location` VARCHAR(45) NULL,
  `hr_id` INT NULL,
  PRIMARY KEY (`position_id`),
  UNIQUE INDEX `position_id_UNIQUE` (`position_id` ASC),
  INDEX `hr_id_idx` (`hr_id` ASC),
  CONSTRAINT `hr_id`
    FOREIGN KEY (`hr_id`)
    REFERENCES `HR_Migration_System`.`HR_manager` (`hr_id`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION)
ENGINE = InnoDB;



-- -------------------------------------------------------
-- Table `HR_Migration_System`.`Plays`
-- -------------------------------------------------------
DROP TABLE IF EXISTS `HR_Migration_System`.`Plays` ;

CREATE TABLE IF NOT EXISTS `HR_Migration_System`.`Plays` (
  `ee_id` INT NULL,
  `username` VARCHAR(20) NOT NULL,
  `er_id` INT NULL,
  `hr_id` INT NULL,
  PRIMARY KEY (`username`),
  UNIQUE INDEX `username_UNIQUE` (`username` ASC),
  INDEX `ee_id_idx` (`ee_id` ASC),
  INDEX `er_id_idx` (`er_id` ASC),
  INDEX `hr_id_idx` (`hr_id` ASC),
  CONSTRAINT `ee_id`
    FOREIGN KEY (`ee_id`)
    REFERENCES `HR_Migration_System`.`Interviewee` (`interviewee_id`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION,
  CONSTRAINT `er_id`
    FOREIGN KEY (`er_id`)
    REFERENCES `HR_Migration_System`.`Interviewer` (`interviewer_id`)
    ON DELETE NO ACTION
```

```
      ON UPDATE NO ACTION,
   CONSTRAINT `hr_id`
      FOREIGN KEY (`hr_id`)
      REFERENCES `HR_Migration_System`.`HR_manager` (`hr_id`)
      ON DELETE NO ACTION
      ON UPDATE NO ACTION)
ENGINE = InnoDB;



-- -----------------------------------------------------
-- Table `HR_Migration_System`.`User`
-- -----------------------------------------------------
DROP TABLE IF EXISTS `HR_Migration_System`.`User` ;

CREATE TABLE IF NOT EXISTS `HR_Migration_System`.`User` (
   `username` VARCHAR(20) NOT NULL,
   `email` VARCHAR(20) NULL,
   `name` VARCHAR(20) NULL,
   `Plays_username` VARCHAR(20) NOT NULL,
   PRIMARY KEY (`username`),
   UNIQUE INDEX `username_UNIQUE` (`username` ASC),
   INDEX `fk_User_Plays_idx` (`Plays_username` ASC),
   CONSTRAINT `fk_User_Plays`
      FOREIGN KEY (`Plays_username`)
      REFERENCES `HR_Migration_System`.`Plays` (`username`)
      ON DELETE NO ACTION
      ON UPDATE NO ACTION)
ENGINE = InnoDB;



-- -----------------------------------------------------
-- Table `HR_Migration_System`.`Applies`
-- -----------------------------------------------------
DROP TABLE IF EXISTS `HR_Migration_System`.`Applies` ;

CREATE TABLE IF NOT EXISTS `HR_Migration_System`.`Applies` (
   `resume` VARCHAR(45) NULL,
   `status` INT NULL,
   `date` DATE NULL,
   `initial_salary` INT NULL,
   `ee_id` INT NOT NULL,
   `pos_id` INT NOT NULL,
   PRIMARY KEY (`ee_id`, `pos_id`),
   INDEX `pos_id_idx` (`pos_id` ASC),
```

```sql
    CONSTRAINT `ee_id`
      FOREIGN KEY (`ee_id`)
      REFERENCES `HR_Migration_System`.`Interviewee` (`interviewee_id`)
      ON DELETE NO ACTION
      ON UPDATE NO ACTION,
    CONSTRAINT `pos_id`
      FOREIGN KEY (`pos_id`)
      REFERENCES `HR_Migration_System`.`Position` (`position_id`)
      ON DELETE NO ACTION
      ON UPDATE NO ACTION)
ENGINE = InnoDB;



-- -----------------------------------------------------
-- Table `HR_Migration_System`.`Interview`
-- -----------------------------------------------------
DROP TABLE IF EXISTS `HR_Migration_System`.`Interview` ;

CREATE TABLE IF NOT EXISTS `HR_Migration_System`.`Interview` (
    `ee_id` INT NOT NULL,
    `er_id` INT NOT NULL,
    `date` DATE NULL,
    `score` INT NULL,
    PRIMARY KEY (`ee_id`, `er_id`),
    INDEX `er_id_idx` (`er_id` ASC),
    CONSTRAINT `ee_id`
      FOREIGN KEY (`ee_id`)
      REFERENCES `HR_Migration_System`.`Interviewee` (`interviewee_id`)
      ON DELETE NO ACTION
      ON UPDATE NO ACTION,
    CONSTRAINT `er_id`
      FOREIGN KEY (`er_id`)
      REFERENCES `HR_Migration_System`.`Interviewer` (`interviewer_id`)
      ON DELETE NO ACTION
      ON UPDATE NO ACTION)
ENGINE = InnoDB;



SET SQL_MODE=@OLD_SQL_MODE;
SET FOREIGN_KEY_CHECKS=@OLD_FOREIGN_KEY_CHECKS;
SET UNIQUE_CHECKS=@OLD_UNIQUE_CHECKS;
```

Section 4.4 Your Meeting Log

No	Date and time	Duration	Location	Discussion topic	Attenders
1	3/17/2018:3:00pm	2.5 hrs	709 Gewu	Project selection	Ning Zhang Yingkai Sun Yue Han Yukun Ma
2	3/23/2018:3:00pm	2 hrs	709 Gewu	Requirements	Ning Zhang Yingkai Sun Yue Han Yukun Ma
3	3/25/2018:8:00pm	2 hrs	709 Gewu	Requirements	Ning Zhang Yingkai Sun Yue Han Yukun Ma
4	4/1/2018:4:00pm	2 hrs	709 Gewu	Requirements	Ning Zhang Yingkai Sun Yue Han Yukun Ma
5	4/8/2018:19:00pm	2 hrs	709 Gewu	Use Case Diagram	Ning Zhang Yingkai Sun Yue Han Yukun Ma
6	4/14/2018:21:00pm	1 hr	709 Gewu	Use Case Diagram	Ning Zhang Yingkai Sun Yue Han Yukun Ma
7	4/22/2018:16:00pm	3 hrs	709 Gewu	Application Design	Ning Zhang Yingkai Sun Yue Han Yukun Ma
8	4/29/2018:20:00pm	3 hrs	709 Gewu	User Interface Design	Ning Zhang Yingkai Sun Yue Han Yukun Ma
9	5/13/2018:20:00pm	3 hrs	709 Gewu	Logical Database Design	Ning Zhang Yingkai Sun

					Yue Han Yukun Ma