IS230 Tutorial – Project Part I

ER design and implementation.

by

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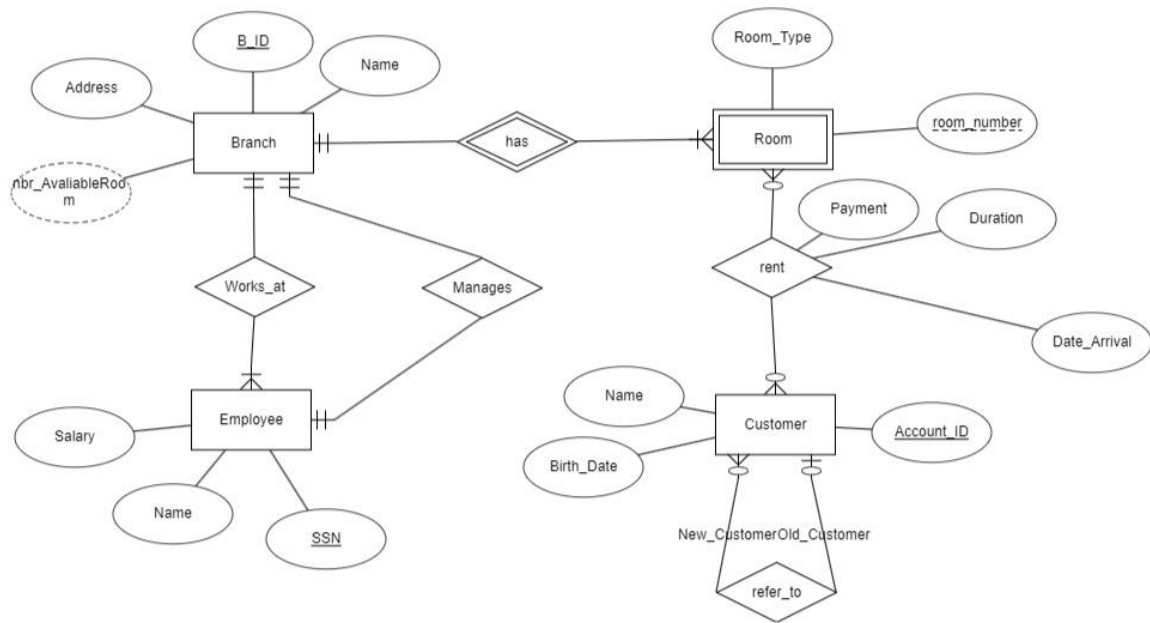**Student Name: Abdullah Aldakhail**

Section: 22142 (from other section)
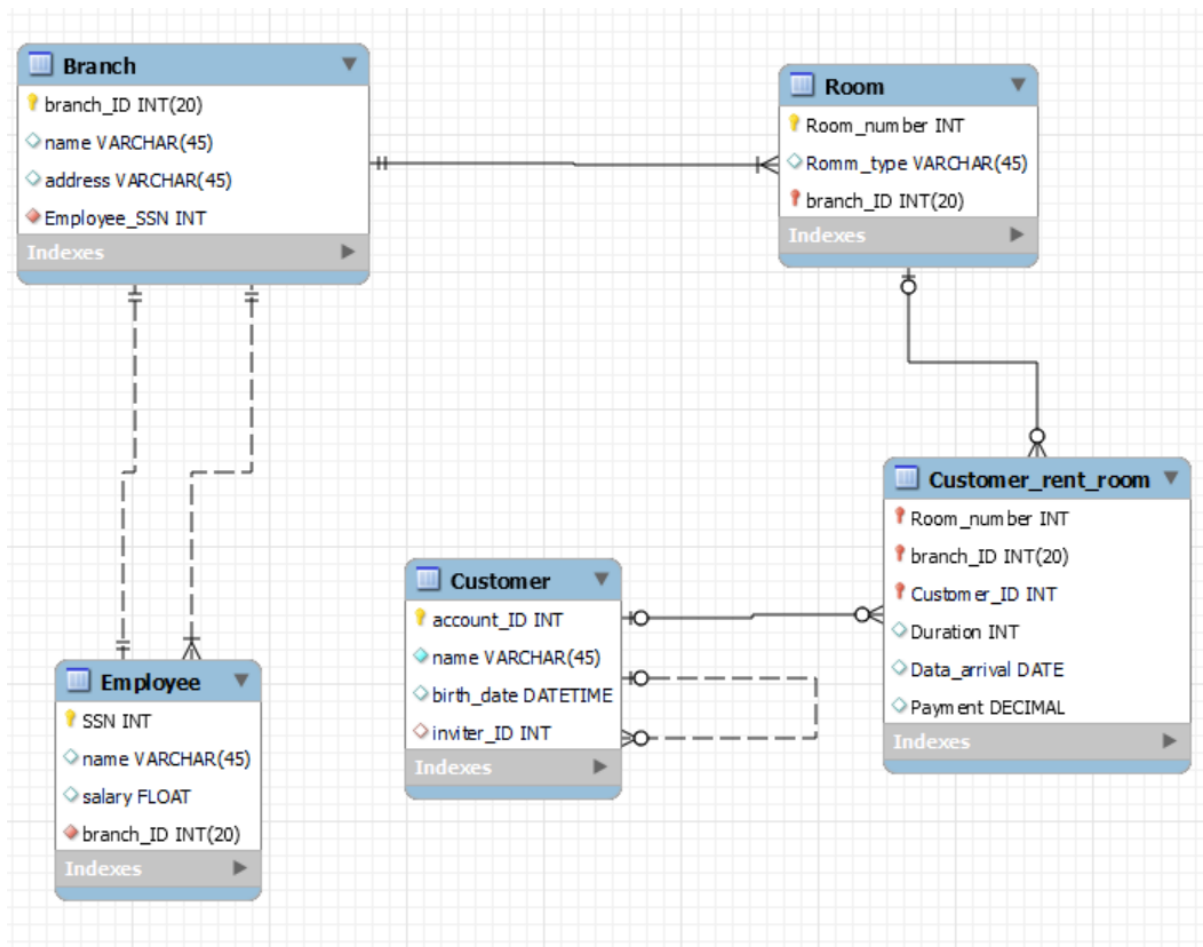
Supervised by

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1. ER

2. MySQL Workbench

You can get the image using: File > Export > Export as PNG

Branch
- branch_ID INT(20)
- name VARCHAR(45)
- address VARCHAR(45)
- Employee_SSN INT

Indexes

Room
- Room_number INT
- Romm_type VARCHAR(45)
- branch_ID INT(20)

Indexes

Customer
- account_ID INT
- name VARCHAR(45)
- birth_date DATETIME
- inviter_ID INT

Indexes

Employee
- SSN INT
- name VARCHAR(45)
- salary FLOAT
- branch_ID INT(20)

Indexes

Customer_rent_room
- Room_number INT
- branch_ID INT(20)
- Customer_ID INT
- Duration INT
- Data_arrival DATE
- Payment DECIMAL

Indexes

3. SQL script to generate the Database:

```
-- MySQL Script generated by MySQL Workbench
-- Sun Oct 22 22:29:00 2023
-- 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='ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZER
O_DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION';


-- -----------------------------------------------------
-- Schema hotel_DB
-- -----------------------------------------------------

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

-- -----------------------------------------------------
-- Table `hotel_DB`.`Employee`
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS `hotel_DB`.`Employee` (
  `SSN` INT NOT NULL,
  `name` VARCHAR(45) NULL,
  `salary` FLOAT NULL,
  `branch_ID` INT(20) NOT NULL,
  PRIMARY KEY (`SSN`),
  INDEX `fk_Employee_Branch_idx` (`branch_ID` ASC) VISIBLE,
  CONSTRAINT `fk_Employee_Branch`
    FOREIGN KEY (`branch_ID`)
    REFERENCES `hotel_DB`.`Branch` (`branch_ID`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION)
ENGINE = InnoDB;


-- -----------------------------------------------------
-- Table `hotel_DB`.`Branch`
-- -----------------------------------------------------
```

```sql
CREATE TABLE IF NOT EXISTS `hotel_DB`.`Branch` (
  `branch_ID` INT(20) NOT NULL,
  `name` VARCHAR(45) NULL,
  `address` VARCHAR(45) NULL,
  `Employee_SSN` INT NOT NULL,
  PRIMARY KEY (`branch_ID`),
  INDEX `fk_Branch_Employee1_idx` (`Employee_SSN` ASC) VISIBLE,
  CONSTRAINT `fk_Branch_Employee1`
    FOREIGN KEY (`Employee_SSN`)
    REFERENCES `hotel_DB`.`Employee` (`SSN`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION)
ENGINE = InnoDB;


-- -------------------------------------------------------
-- Table `hotel_DB`.`Customer`
-- -------------------------------------------------------
CREATE TABLE IF NOT EXISTS `hotel_DB`.`Customer` (
  `account_ID` INT NULL,
  `name` VARCHAR(45) NOT NULL,
  `birth_date` DATETIME NULL,
  `inviter_ID` INT NULL,
  PRIMARY KEY (`account_ID`),
  INDEX `fk_Customer_Customer1_idx` (`inviter_ID` ASC) VISIBLE,
  CONSTRAINT `fk_Customer_Customer1`
    FOREIGN KEY (`inviter_ID`)
    REFERENCES `hotel_DB`.`Customer` (`account_ID`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION)
ENGINE = InnoDB;


-- -------------------------------------------------------
-- Table `hotel_DB`.`Room`
-- -------------------------------------------------------
CREATE TABLE IF NOT EXISTS `hotel_DB`.`Room` (
  `Room_number` INT NOT NULL,
  `Romm_type` VARCHAR(45) NULL,
  `branch_ID` INT(20) NOT NULL,
  PRIMARY KEY (`Room_number`, `branch_ID`),
  INDEX `fk_Room_Branch1_idx` (`branch_ID` ASC) VISIBLE,
  CONSTRAINT `fk_Room_Branch1`
```

```
    FOREIGN KEY (`branch_ID`)
    REFERENCES `hotel_DB`.`Branch` (`branch_ID`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION)
ENGINE = InnoDB;



-- -------------------------------------------------------
-- Table `hotel_DB`.`Customer_rent_room`
-- -------------------------------------------------------
CREATE TABLE IF NOT EXISTS `hotel_DB`.`Customer_rent_room` (
  `Room_number` INT NULL,
  `branch_ID` INT(20) NULL,
  `Customer_ID` INT NULL,
  `Duration` INT NULL,
  `Data_arrival` DATE NULL,
  `Payment` DECIMAL NULL,
  PRIMARY KEY (`Room_number`, `branch_ID`, `Customer_ID`),
  INDEX `fk_Room_has_Customer_Customer1_idx` (`Customer_ID` ASC) VISIBLE,
  INDEX `fk_Room_has_Customer_Room1_idx` (`Room_number` ASC, `branch_ID` ASC)
VISIBLE,
  CONSTRAINT `fk_Room_has_Customer_Room1`
    FOREIGN KEY (`Room_number` , `branch_ID`)
    REFERENCES `hotel_DB`.`Room` (`Room_number` , `branch_ID`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION,
  CONSTRAINT `fk_Room_has_Customer_Customer1`
    FOREIGN KEY (`Customer_ID`)
    REFERENCES `hotel_DB`.`Customer` (`account_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;
```