```
CREATE SCHEMA `BankingDB` ;

CREATE TABLE `BankingDB`.`address` (
  `address_id` INT UNSIGNED NOT NULL,
  `house_number` INT UNSIGNED NOT NULL,
  `street` VARCHAR(30) NOT NULL,
  `zip_code` INT UNSIGNED NOT NULL,
  `city` VARCHAR(30) NOT NULL,
  `state` VARCHAR(2) NOT NULL,
  PRIMARY KEY (`address_id`));

CREATE TABLE `BankingDB`.`customer` (
  `customer_id` INT UNSIGNED NOT NULL,
  `fname` VARCHAR(30) NULL,
  `sname` VARCHAR(30) NOT NULL,
  `ssn` INT UNSIGNED NOT NULL,
  `address_id` INT UNSIGNED NOT NULL,
  PRIMARY KEY (`customer_id`),
  UNIQUE INDEX `ssn_UNIQUE` (`ssn` ASC) VISIBLE,
  INDEX `customer_address_idx` (`address_id` ASC) VISIBLE,
  CONSTRAINT `customer_address`
    FOREIGN KEY (`address_id`)
    REFERENCES `BankingDB`.`address` (`address_id`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION);

CREATE TABLE `BankingDB`.`branch` (
  `branch_id` INT UNSIGNED NOT NULL,
  `address_id` INT UNSIGNED NOT NULL,
  PRIMARY KEY (`branch_id`),
  INDEX `branch_address_idx` (`address_id` ASC) VISIBLE,
  CONSTRAINT `branch_address`
    FOREIGN KEY (`address_id`)
    REFERENCES `BankingDB`.`address` (`address_id`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION);

CREATE TABLE `BankingDB`.`employee` (
  `employee_id` INT UNSIGNED NOT NULL,
  `fname` VARCHAR(30) NULL,
  `sname` VARCHAR(30) NOT NULL,
  `salary` INT NOT NULL,
  `position` VARCHAR(40) NOT NULL,
  `ssn` INT UNSIGNED NOT NULL,
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  `address_id` INT UNSIGNED NOT NULL,
  `branch_id` INT UNSIGNED NOT NULL,
  PRIMARY KEY (`employee_id`),
  INDEX `employee_address_idx` (`address_id` ASC) VISIBLE,
  INDEX `employee_branch_idx` (`branch_id` ASC) VISIBLE,
  CONSTRAINT `employee_address`
    FOREIGN KEY (`address_id`)
    REFERENCES `BankingDB`.`address` (`address_id`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION,
  CONSTRAINT `employee_branch`
    FOREIGN KEY (`branch_id`)
    REFERENCES `BankingDB`.`branch` (`branch_id`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION);

CREATE TABLE `BankingDB`.`account_type` (
  `type` VARCHAR(40) NOT NULL,
  `interest_rate` FLOAT NULL,
  `required_deposit` FLOAT NULL,
  `overdraft_fee` FLOAT NULL,
  `service_fee` FLOAT NULL,
  `annual_percentage_fee` FLOAT NULL,
  PRIMARY KEY (`type`));

CREATE TABLE `BankingDB`.`account` (
  `account_num` INT UNSIGNED NOT NULL,
  `account_name` VARCHAR(40) NOT NULL,
  `balance` VARCHAR(45) NOT NULL,
  `branch_id` INT UNSIGNED NOT NULL,
  `type` VARCHAR(40) NULL,
  `customer_id` INT UNSIGNED NOT NULL,
  PRIMARY KEY (`account_num`),
  INDEX `account_home_branch_idx` (`branch_id` ASC) VISIBLE,
  INDEX `account_type_idx` (`type` ASC) VISIBLE,
  INDEX `account_owner_idx` (`customer_id` ASC) VISIBLE,
  CONSTRAINT `account_home_branch`
    FOREIGN KEY (`branch_id`)
    REFERENCES `BankingDB`.`branch` (`branch_id`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION,
  CONSTRAINT `account_type`
    FOREIGN KEY (`type`)
    REFERENCES `BankingDB`.`account_type` (`type`)
```

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    ON DELETE NO ACTION
    ON UPDATE NO ACTION,
  CONSTRAINT `account_owner`
    FOREIGN KEY (`customer_id`)
    REFERENCES `BankingDB`.`customer` (`customer_id`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION);

CREATE TABLE `BankingDB`.`transaction` (
  `trans_id` INT UNSIGNED NOT NULL,
  `amount` FLOAT NOT NULL,
  `date` DATE NOT NULL,
  `trans_type` VARCHAR(10) NOT NULL,
  `account_num` INT UNSIGNED NOT NULL,
  PRIMARY KEY (`trans_id`),
  INDEX `transaction_account_idx` (`account_num` ASC) VISIBLE,
  CONSTRAINT `transaction_account`
    FOREIGN KEY (`account_num`)
    REFERENCES `BankingDB`.`account` (`account_num`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION);
```