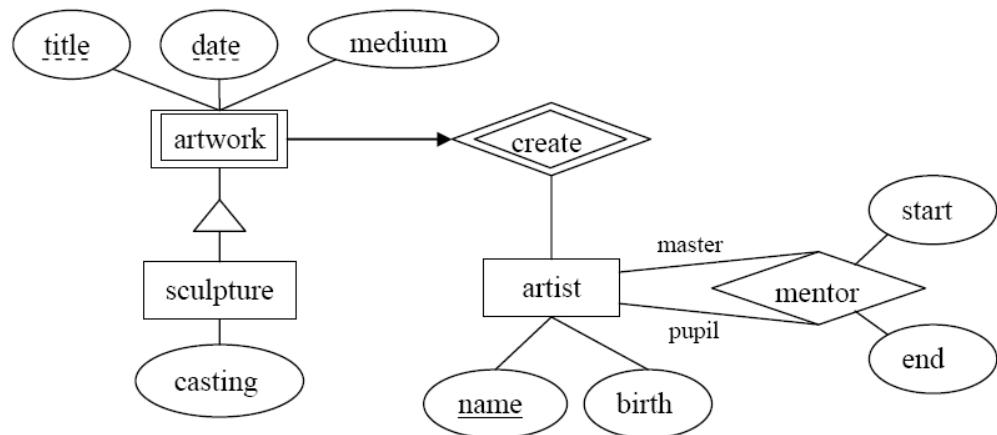


1. Translate the following E-R Diagram into an equivalent relational database schema.



2. According to the Airline Database, please answer the question 2.1-2.5
- 2.1 Design the E-R diagram based on the “[airline](#)” database. Your diagram must include entities, relationship, attributes, primary keys, and foreign keys.

2.2 List all the relational schema for the “airline” database

2.3 Write SQL queries that implement each of the following.

(a) Find the eids and name of pilots certified for Boeing aircraft.

(b) For all aircraft with cruising miles over 1000 miles, find the name of the aircraft and the average salary of all pilots certified for this aircraft.

- 2.4 Write the following queries in relational algebra
- (a) Find the names of pilots certified for Boeing aircraft.

- (b) Find the names of pilots who can operate planes with a range greater than 3,000 miles but are not certified on any Boeing aircraft.