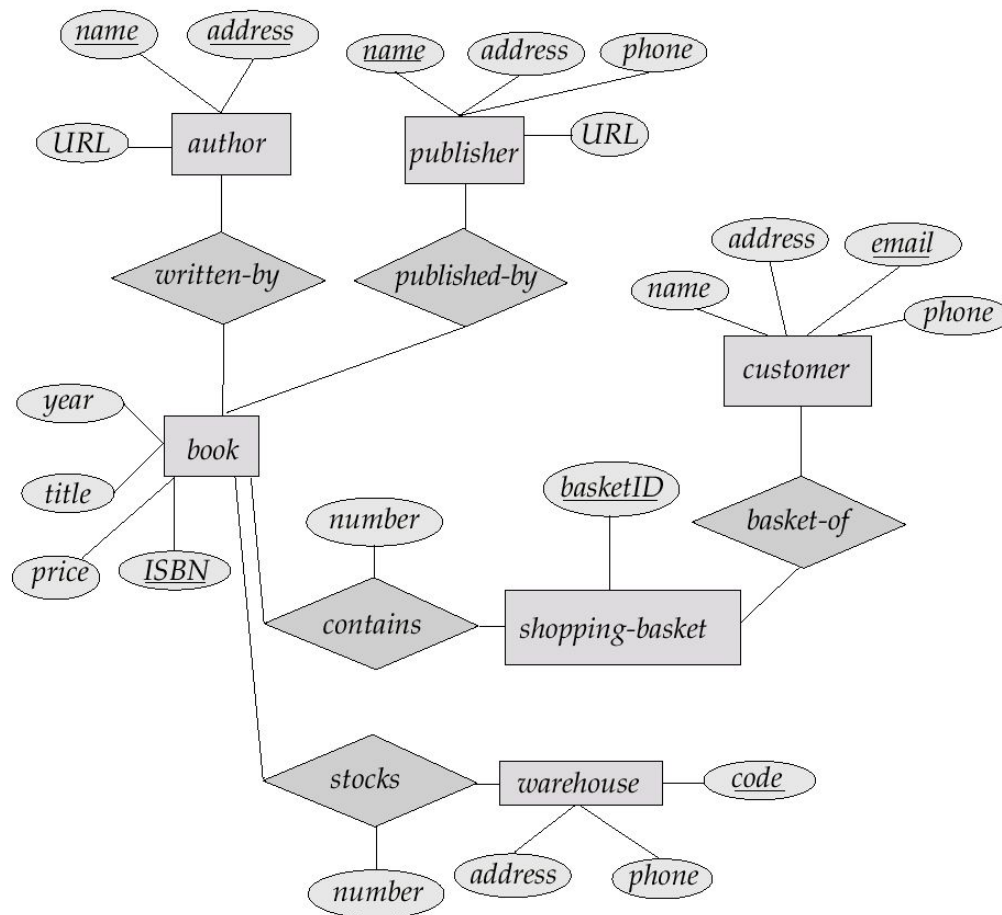


Lab Session 3: Conversion of ER models to Relational Models

1. Consider the following E-R model about a bookshop database:

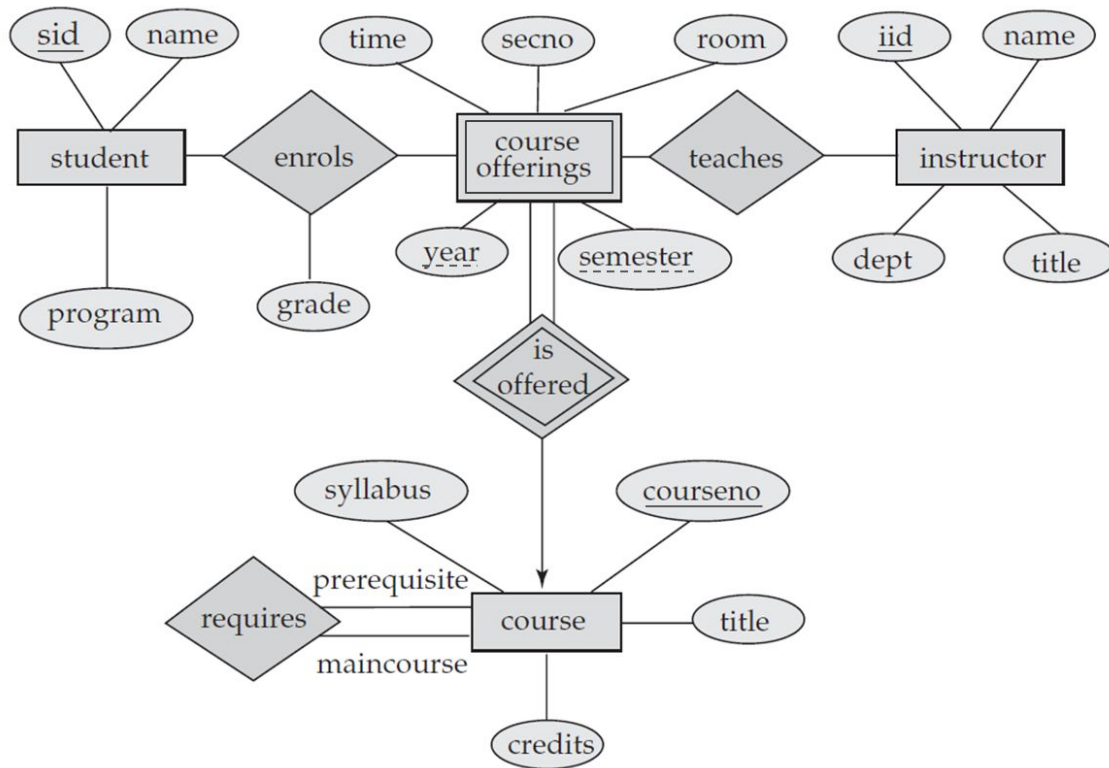


Convert this E-R model to a relational model by specifying the set of tables that should be created, including their columns, keys, and foreign keys. Use the following notation:

$table_1(\underline{column_1}, column_2, column_3, column_4, \dots)$
 $column_2 : FK(table_2)$
 $column_3, column_4 : FK(table_3)$

where $\underline{column_1}$ is underlined because it is the table key, and $column_2$ is a foreign key to another table ($table_2$).

2. Consider the following E-R model about a university database:

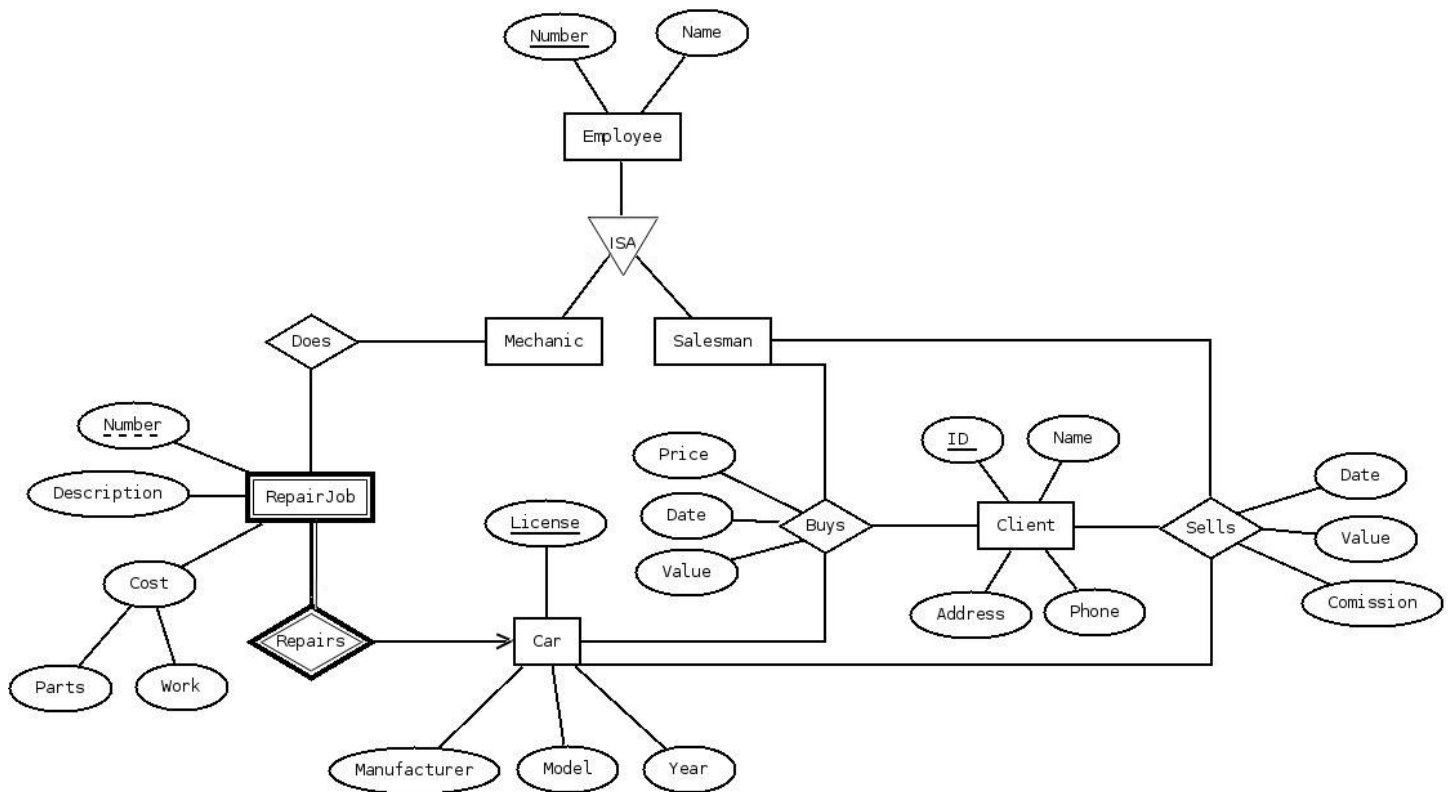


Convert this E-R model to a relational model by specifying the set of tables that should be created, including their columns, keys, and foreign keys. Use the following notation:

$table_1(\underline{column_1}, column_2, column_3, column_4, \dots)$
 $column_2 : FK(table_2)$
 $column_3, column_4 : FK(table_3)$

where $\underline{column_1}$ is underlined because it is the table key, and $column_2$ is a foreign key to another table ($table_2$).

3. Consider the following E-R model about an auto repair shop:

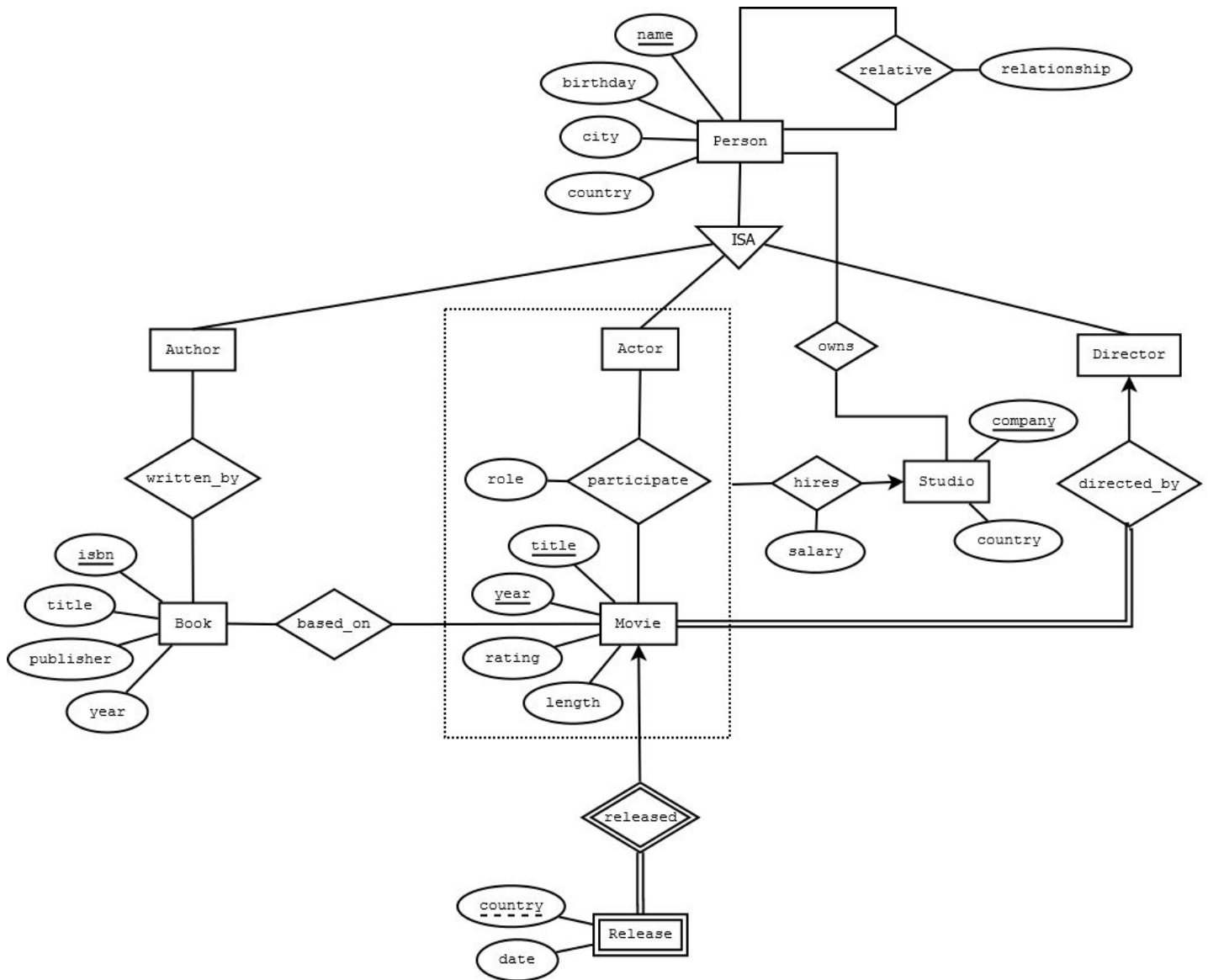


Convert this E-R model to a relational model by specifying the set of tables that should be created, including their columns, keys, and foreign keys. Use the following notation:

$table_1(\underline{column_1}, column_2, column_3, column_4, \dots)$
 $column_2 : FK(table_2)$
 $column_3, column_4 : FK(table_3)$

where $\underline{column_1}$ is underlined because it is the table key, and $column_2$ is a foreign key to another table ($table_2$).

4. The following diagram is a possible solution for exercise 1 in the previous lab:



Convert this E-R model to a relational model by specifying the set of tables that should be created, including their columns, keys, and foreign keys. Use the following notation:

$table_1(\underline{column_1}, column_2, column_3, column_4, \dots)$
 $column_2 : FK(table_2)$
 $column_3, column_4 : FK(table_3)$

where $\underline{column_1}$ is underlined because it is the table key, and $column_2$ is a foreign key to another table ($table_2$).