

Coding Activity 2

Activity Overview:

This activity involves the coding and testing of a Prolog program involving lists. Do not use any code that we have not covered in class. Submit your code and additional documents on Blackboard.

Activity Specifications:

In this program, you will write Prolog code for a restaurant database of a certain geographic area. Select at least 2 different types of restaurants, such as Mexican, Pizza, or Seafood. Among these types, select at least 3 different restaurants with similar menu options that exist in a certain geographic area.

1. Write the predicate fact **type** that includes each restaurant's name and the food type.
2. Write the predicate fact **restaurant** that includes each restaurant's name and a list of menu items. Make sure to include at least 4 menu items. Write each menu item in the list as a predicate fact with the menu name, a list of ingredients, and the cost of the item. For example, a predicate fact for the menu item:

`salad(cobb, [lettuce, tomato, egg, blueCheese], 8.99).`

3. Write the predicate rule **menu(X, Y)** in which store X has Y on the menu.
4. Write the predicate rule **item(X, Y, Z)** in which store X has item Y with ingredient Z.
5. Write the predicate rule **cost(X, Y, Z)** in which store X has drink Y with cost Z.

Answer the following questions:

1. Give an example of a query that yields a list of restaurants of a certain food type.
2. Give an example of a query that yields a list of restaurants of a certain menu item.
3. Give an example of a query that yields a list of restaurants with menu items for a specific ingredient. That is, which restaurants and menu items have cheese as an ingredient?
4. Give an example of a query that yields a list of menu items and its ingredients for a specific restaurant.
5. Give an example of a query that yields a list of menu items with the cost for a specific restaurant.

Deliverables:

`coding2.pl` -- your source code