Coding Problem

Your solution will be evaluated based on: object oriented design and principles, code structure, readability, maintainability, and testability

Build a **console application** that takes in a time of day and the types of dishes we want to eat, returning the foods to make. Rules:

- 1. You must enter time of day as "morning" or "night"
- 2. You must enter a comma delimited list of dish types with at least one selection
- 3. The output must print food in the following order: entrée, side, drink, desert
- 4. There is no desert for morning meals
- 5. Input is not case sensitive
- 6. If invalid selection is encountered, display valid selections up to the error, then print error
- 7. In the morning, you can order multiple cups of coffee
- 8. At night, you can have multiple orders of potatoes
- 9. Except for the above rules, you can only order 1 of each dish type

Dishes for Each time of day

Dish Type	morning	night	
1 (entrée)	eggs	steak	
2 (side)	Toast	potato	
3 (drink)	coffee	wine	
4 (desert)	Not Applicable	cake	

Sample Input and Output:

Input: morning, 1, 2, 3 Output: eggs, toast, coffee

Input: morning, 2, 1, 3 Output: eggs, toast, coffee

Input: morning, 1, 2, 3, 4

Output: eggs, toast, coffee, error

Input: morning 1, 2, 3, 3, 3 Output: eggs, toast, coffee(x3)

Input: night, 1, 2, 3, 4

Output: steak, potato, wine, cake

Input: night, 1, 2, 2, 4

Output steak, potato(x2), cake

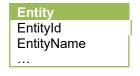
Input: night, 1, 2, 3, 5

Output: steak, potato, wine, error

Input: night, 1, 1, 2, 3, 5 Output: steak, error

Database Problem

Given the following database structure:







1) Write a query that returns a list of all balances for entity named "ABCD" and, for each date shown, if available, the status on that date [defined as the "most recent up to but not exceeding the balance date"].

Example: Given data below:

EntityID	BalanceDate	Balance
1	5/1/2010	100.00
1	4/1/2010	50.00
1	3/1/2010	75.00
1	2/1/2010	85.00
2	5/1/2010	110.00

EntityID	StatusDate	Status
1	5/29/2010	Α
1	4/16/2010	В
1	4/2/2010	С
1	2/26/2010	D
2	5/1/2010	В

EntityID	EntityName
1	ABCD
2	XYZ

the following output would be expected:

EntityName	Date	Balance	Status
XYZ	5/1/2010	110.00	В
ABCD	5/1/2010	100.00	В
ABCD	4/1/2010	50.00	D
ABCD	3/1/2010	75.00	D
ABCD	2/1/2010	85.00	<null></null>

2) Write a query that returns average balance and most recent status for every entity Example: given the data example in step 1, the following output would be expected:

EntityName	Status	As Of	Avg Balance
XYZ	B	5/1/2010	110.00
ABCD	A	5/29/2010	77.50