Project 1: A Night Out at BuXa

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In my past life, I used to own a few bars and restaurants in Tel Aviv. My favorite one was BuXa, which was a combination of an underground club, an art gallery, and a place to eat good food.

In this project, I would simulate a customer's night out at the BuXa. Sort of. The customer will be able to move through the different sections of the venue- the bar, the main floor, the art gallery, the outside lounge and even the restroom.

The goal of the customer will be spending an enjoyable night out at the BuXa and steal as many toys as possible. Another goal would be going home before getting kicked out, which could occur if the player drink too much, gets caught stealing or runs out of money.

CLASSES

1) **Customer-** Will be the main class, containing all the attributes and methods relevant to that customer.

Attributes:

1. age- Will be used to determine how drunk the customer is
2. weight- Will be used to determine how drunk the customer is
3. height- Will be used to determine how drunk the customer is
4. sex- Will be used to determine how drunk the customer is
5. level- Will determine the levels of alcohol for the customer
6. money- How much money the customer has left
7. location- Where the customer is at the moment
8. score- keeps track of the player's score

Methods:

1. MoveRoom
   Input: Where does the customer want to go next within the BuXa
   Output: Changes player's location accordingly
2. hang
   Input: How long the customer wants to stay at that area
   Outputs: How much alcohol the customer reduced during that time

3. enter
   Input: None
   Output: Enters BuXa if the customer is outside
4. leave
   Input: None
   Outputs: Goes outside if the customer is inside
5. GoHome
   Input: None
   Outputs: Goes home if the user is outside

2) Area- Will be a parent class for the different areas of the BuXa

Attributes:

Same as parent class, Customer

Methods:

1. StealToy- Yeah, customer sometimes did that…
   Input: None
   Outputs: Success or failure, depends on the levels of alcohol as well as a random factor. Scores will be accumulated accordingly, in a case of success.

3) Menu:

Attributes:

1. FoodMenu- A dictionary containing all the food items, their prices and how much they reduce the alcohol levels
2. DrinkMenu- A dictionary containing all the drink items, their prices, their volume and the percentage of alcohol
3. ArtMenu- A dictionary containing all the art items and their prices

Methods:

1. buy_food
   Input: food item
   Outputs: retrieves the relevant food item from the menu
2. buy_drink
   Input: drink item

Outputs: retrieves the relevant drink item from the menu

3. buy_art
   Input: art item
   Outputs: retrieves the relevant art item from the menu

4) Bar- Will be a subclass of Area

Attributes:

None

Methods:

1. eat
   Input: Food item
   Outputs: Displays menu and allows the player to choose an item. New alcohol levels and money will be adjusted accordingly
2. drink
   Input: Drink item
   Outputs: Displays menu and allows the player to choose an item. New alcohol levels and money will be adjusted accordingly

5) MainFloor- Will be a subclass of Area

Attributes:

None

Methods:

1. Dance
   Input: how much time the player would like to dance
   Output: Decrease in alcohol levels during that time

6) ArtGallery- Will be a subclass of Area

Attributes:

None

Methods:

3. BuyArt
   Input: Art item

Outputs: Displays menu and allows the player to choose an item. Money will be adjusted and displayed accordingly.

7) **Lounge-** Will be a subclass of Area

Attributes:

None

Methods:

No unique methods- inherits the same ones the main floor (mostly for dancing and hanging)

8) **Restroom-** Will be a subclass of Area

Attributes:

None

Methods:

1. UseRestroom
   Input: time the user will spend in the restroom
   Outputs: Displays how much the alcohol levels decreased during that time

INTERACTION:

After the user enters, the user will move inside the BuXa between the different areas, performing different actions in every area, that are applicable to that area.

The current amount of alcohol and money, as well as the score, will be taken into account the whole time, with different actions causing the alcohol to be reduced or increased, money to decrease and score to increase.

The goal is for the user to go home, before being too drunk, running out of money, or being caught stealing a toy, while achieving maximum score.

COMPLEXITY:

The project will include multiple counters, inherited attributes and methods, and they will all need to correspond to the user's actions. I predict the project to require many lines of code, while keeping in mind multiple nuances at a time and adhering to multiple restriction for each area in which the user is currently at.

I am certain this would be an iterative process and many changes are expected, but overall, I think I will be able to stick to the described structure.