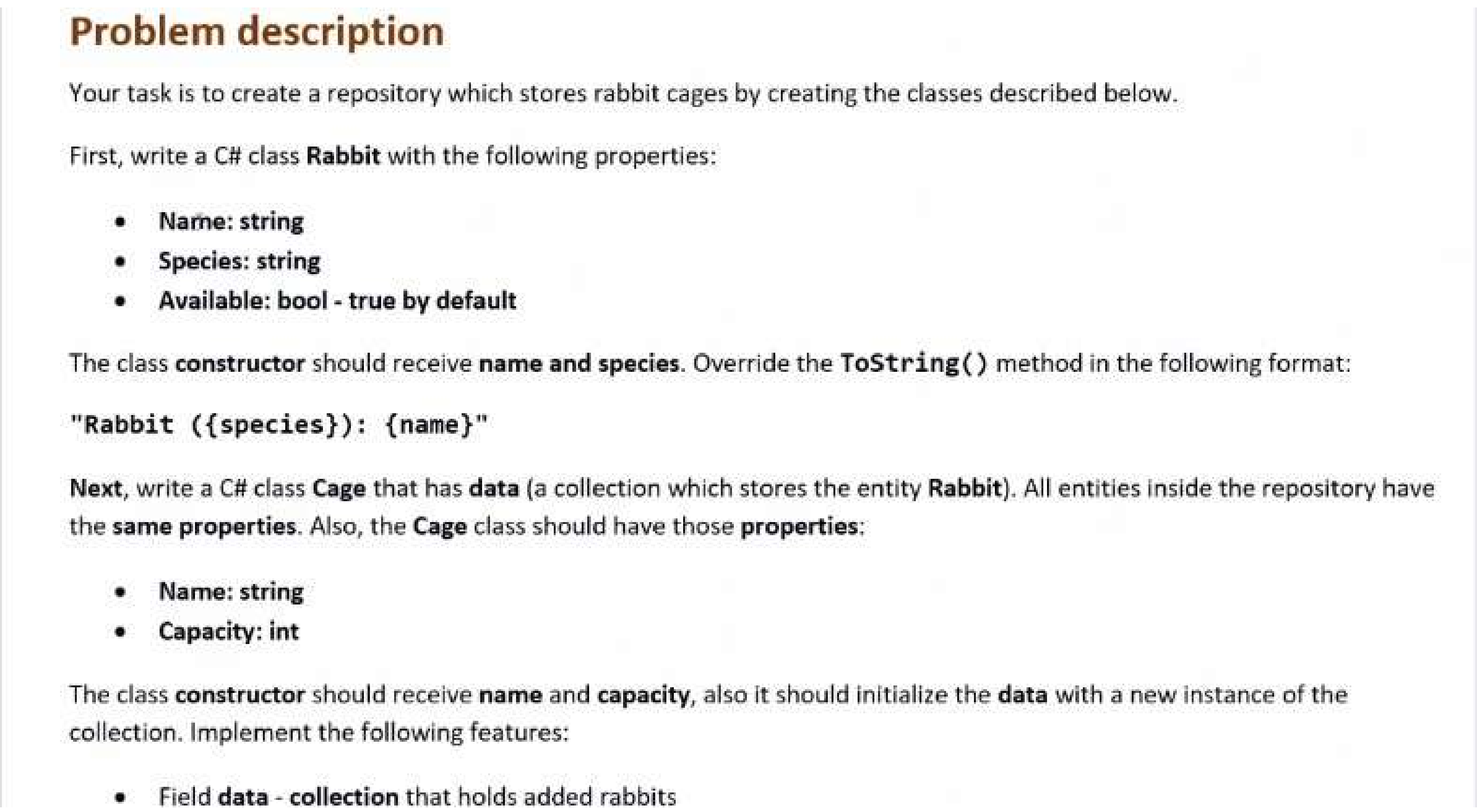


Problem description

Your task is to create a repository which stores rabbit cages by creating the classes described below.

First, write a C# class **Rabbit** with the following properties:

- **Name: string**
- **Species: string**
- **Available: bool - true by default**

The class **constructor** should receive **name and species**. Override the **`ToString()`** method in the following format:

`"Rabbit ({species}): {name}"`

Next, write a C# class **Cage** that has **data** (a collection which stores the entity **Rabbit**). All entities inside the repository have the **same properties**. Also, the **Cage** class should have those **properties**:

- **Name: string**
- **Capacity: int**

The class **constructor** should receive **name** and **capacity**, also it should initialize the **data** with a new instance of the collection. Implement the following features:

- Field **data** - **collection** that holds added rabbits

- **Name: string**
- **Capacity: int**

The class **constructor** should receive **name** and **capacity**, also it should initialize the **data** with a new instance of the collection. Implement the following features:

- Field **data** - **collection** that holds added rabbits
- Method **`Add(Rabbit rabbit)`** - **adds** an **entity** to the data **if there is room** for it
- Method **`RemoveRabbit(string name)`** - removes a rabbit by **given name,** if such **exists**, and **returns bool**
- Method **`RemoveSpecies(string species)`** - removes **all rabbits** by given **species**
- Method **`SellRabbit(string name)`** - **sell** (**set** its **`Available` property** to **false** without removing it from the collection) the **first rabbit** with the **given name**, also **return** the **rabbit**
- Method **`SellRabbitsBySpecies(string species)`** - sells (**set** their **`Available` property** to **false** without removing them from the collection) and returns **all rabbits** from that **species** **as an array**
- Getter **`Count`** - **returns** the **number** of rabbits
- **`Report()`** - **returns** a **string** in the following **format, including only** **not sold** **rabbits**:

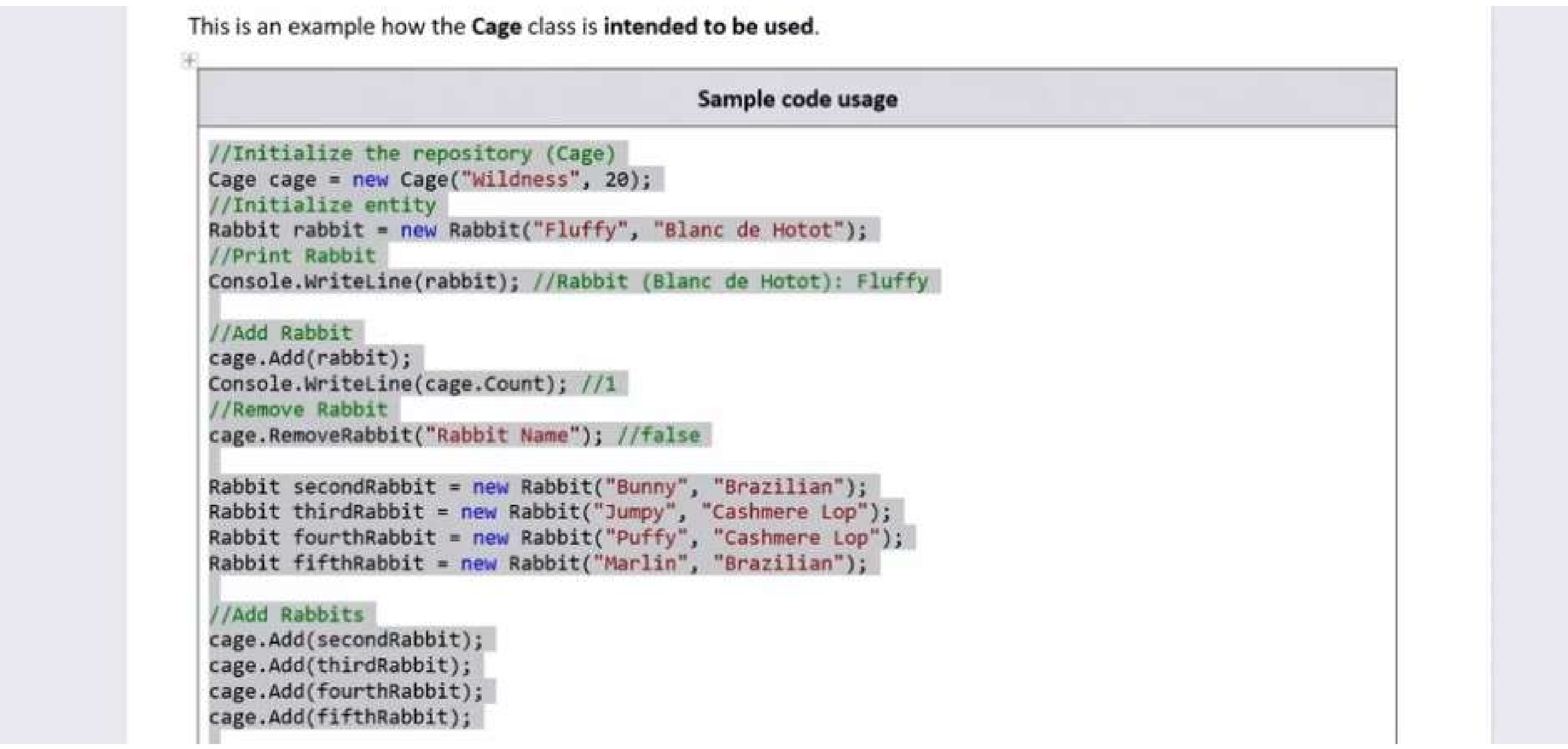
-
  ```
  "Rabbits available at {cageName}:
  {Rabbit1}
  {Rabbit2}
  (…)"
  ```

Constraints

- The **names** of the rabbits will be **always unique**.
- You will always have a rabbit added before receiving methods manipulating the Cage's rabbits.

Examples

This is an example how the **Cage** class is **intended to be used**.



This is an example how the **Cage** class is **intended to be used**.

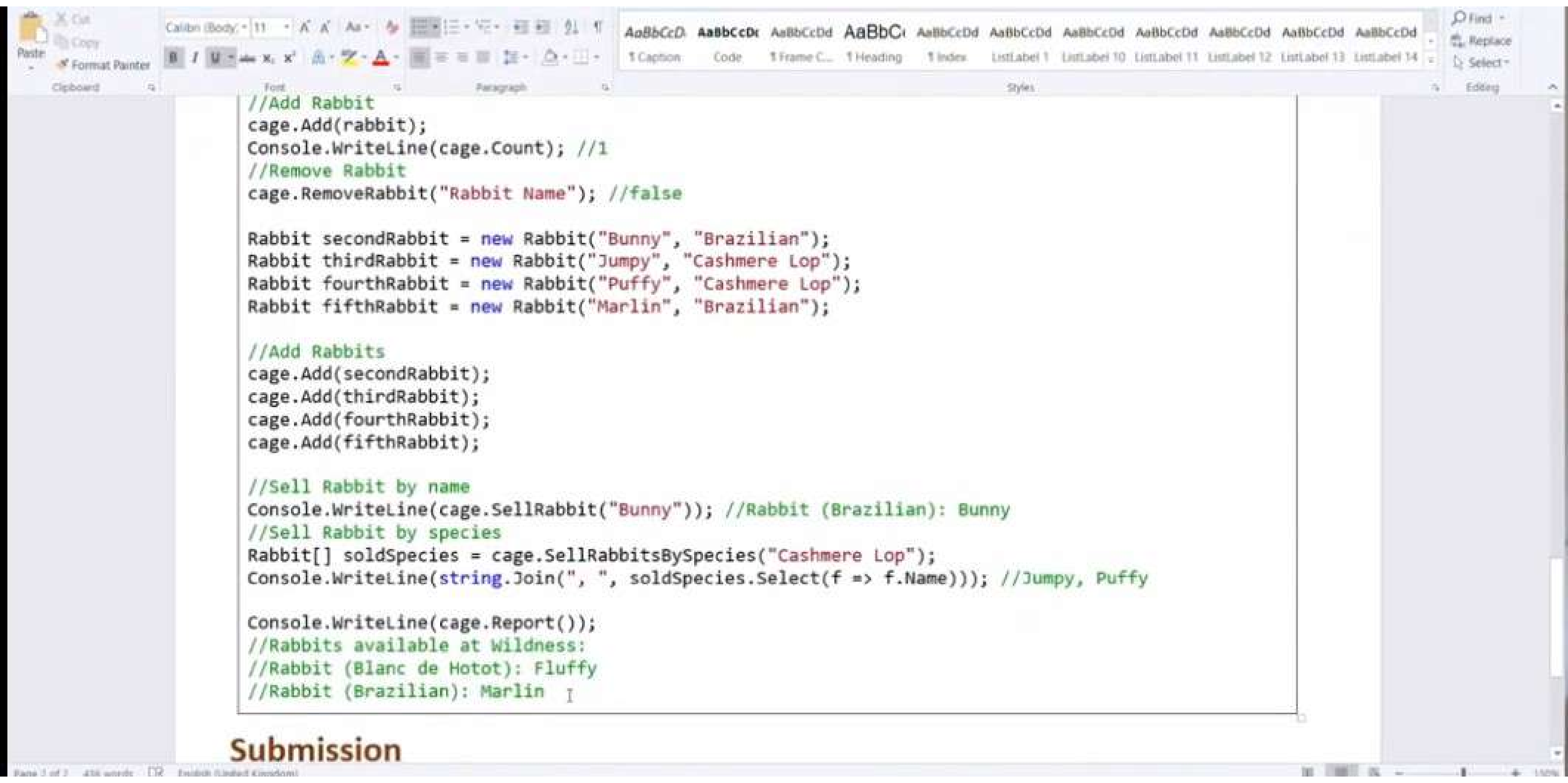
Sample code usage

```
//Initialize the repository (Cage)
Cage cage = new Cage("Wildness", 20);
//Initialize entity
Rabbit rabbit = new Rabbit("Fluffy", "Blanc de Hotot");
//Print Rabbit
Console.WriteLine(rabbit); //Rabbit (Blanc de Hotot): Fluffy

//Add Rabbit
cage.Add(rabbit);
Console.WriteLine(cage.Count); //1
//Remove Rabbit
cage.RemoveRabbit("Rabbit Name"); //false

Rabbit secondRabbit = new Rabbit("Bunny", "Brazilian");
Rabbit thirdRabbit = new Rabbit("Jumpy", "Cashmere Lop");
Rabbit fourthRabbit = new Rabbit("Puffy", "Cashmere Lop");
Rabbit fifthRabbit = new Rabbit("Marlin", "Brazilian");

//Add Rabbits
cage.Add(secondRabbit);
cage.Add(thirdRabbit);
cage.Add(fourthRabbit);
cage.Add(fifthRabbit);
```



```
//Add Rabbit
cage.Add(rabbit);
Console.WriteLine(cage.Count); //1
//Remove Rabbit
cage.RemoveRabbit("Rabbit Name"); //false

Rabbit secondRabbit = new Rabbit("Bunny", "Brazilian");
Rabbit thirdRabbit = new Rabbit("Jumpy", "Cashmere Lop");
Rabbit fourthRabbit = new Rabbit("Puffy", "Cashmere Lop");
Rabbit fifthRabbit = new Rabbit("Marlin", "Brazilian");

//Add Rabbits
cage.Add(secondRabbit);
cage.Add(thirdRabbit);
cage.Add(fourthRabbit);
cage.Add(fifthRabbit);

//Sell Rabbit by name
Console.WriteLine(cage.SellRabbit("Bunny")); //Rabbit (Brazilian): Bunny
//Sell Rabbit by species
Rabbit[] soldSpecies = cage.SellRabbitsBySpecies("Cashmere Lop");
Console.WriteLine(string.Join(", ", soldSpecies.Select(f => f.Name))); //Jumpy, Puffy

Console.WriteLine(cage.Report());
//Rabbits available at Wildness:
//Rabbit (Blanc de Hotot): Fluffy
//Rabbit (Brazilian): Marlin
```

Submission