

Repository

Preparation

Download the skeleton provided in Judge. **Do not** change the **StartUp** class or its **namespace**.

Problem description

Write a C# class **Person** that has the following properties:

- **Name** - String
- **Age** - Integer
- **Birthdate** - DateTime

The class **constructor** should receive all the properties (**name, age, birthdate**).

```
public class Person
{
    // TODO: implement this class
}
```

Write a C# class **Repository** that has **data field**, which stores entities). All entities inside the repository have the **same properties** and a **unique ID**, that is assigned when they are added **starting from zero**.

```
public class Repository
{
    // TODO: implement this class
}
```

The class **constructor** should initialize the **data** with a new **Dictionary** instance. Implement the following features:

- Method **Add(Person person)** - adds an entity to the Data;
- Method **Get(int id)** - returns the entity with given ID
- Method **Update(int id, Person newPerson)** - replaces the entity with the given id with the new entity. Returns false if the id doesn't exist, otherwise returns true.
- Method **Delete(id)** - deletes an entity by given id. Return false if the id doesn't exist, otherwise return true.
- Getter **Count** - returns the number of stored entities

Examples

This is an example how the **Repository** class is **intended to be used**. Make sure to comment out the parts that throw an error!

Sample code usage

```
Repository = new Repository();

repository.Add(new Person("George", 10, new DateTime(2009, 05, 04)));
repository.Add(new Person("Peter", 5, new DateTime(2014, 05, 24)));

Person foundPerson = repository.Get(0);
Console.WriteLine($"{foundPerson.Name} is {foundPerson.Age} years old
({foundPerson.Birthdate:dd/MM/yyyy})");
//George is 10 years old (04/05/2009)

Person newPerson = new Person("John", 12, new DateTime(2007, 2, 3));
repository.Update(2, newPerson); // false
repository.Update(0, newPerson); // true

foundPerson = repository.Get(0);
Console.WriteLine($"{foundPerson.Name} is {foundPerson.Age} years old
({foundPerson.Birthdate:dd/MM/yyyy})");
//John is 12 years old (03/02/2007)

Console.WriteLine(repository.Count); // 2

repository.Delete(5); // false
repository.Delete(0); // true

Console.WriteLine(repository.Count); // 1
```

Constraints

- The ID should change **only** when we **add** a new entity.
- The ID is unique per repository – if two repositories are instantiated, each has its own counter.

Submission

Submit **the entire project without bin and obj folders.**