Coding Puzzles

Your first step into the ALS recruitment process is to demonstrate your understanding of writing code in either VB.NET or C#. You will be presented with three separate puzzles which you will need to solve. Once your code has been submitted, it will be reviewed by several developers.

When writing your code, please be mindful of the following

- Your code should be production ready.
- Your code should be understandable and maintainable by other developers.
- Your code should be robust and should handle errors appropriately.
- Your code should be bug free, compile and work.

Fizz Buzz

Write a program that,

- Prints the numbers from 1 to 100
- For multiples of 3 print "Fizz" instead of the number
- For multiples of 5 print "Buzz" instead of the number
- For multiples of 3 and 5 print "FizzBuzz" instead of the number

Super Market Register

Implement the code to make the following test pass. Use your favorite Test Engine.

```
public void TestPurchase()
{
    var receipt = new Receipt();
    receipt.AddItem(1, "Candy Bar", 0.50);
    receipt.AddItem(2, "Soda", 1);
    var expected =
        @"1 Candy Bar @ $0.50 = $0.50
2 Soda @ $1.00 = $2.00
SubTotal = $2.50
Tax (10%) = $0.25
Total = $2.75";
    Assert.AreEqual(expected, receipt.ToString());
}
```

Xbox Game

You have to build a game library to allow gamers to list and review games. You need to store the following information.

Games	
Title	The title of the game
Description	Description of the game

Rating	The average rating based on votes from users (from 1-5 stars).

For example

Title	Description	Rating
Gears of War 3	Lorem ipsum dolor sit amet, consectetur adipiscing elit	⭐⭐⭐⭐⭐
Step Up for Kinnect	Integer magna magna, iaculis euismod tincidunt a, cursus ac dolor. Aenean quis egestas diam. Pellentesque purus ipsum, elementum sit amet malesuada eget, aliquet eu magna. Nullam magna massa, sodales nec imperdiet quis, consectetur eget nisl. Aenean eget velit in eros porta dictum. Sed eu dui in augu	⭐
Dead Island	Vivamus purus eros, aliquet malesuada gravida at, fringilla vel elit. Mauris vestibulum, erat at volutpat semper, metus enim faucibus nunc, in ultrices magna enim in justo	⭐⭐⭐

Requirements

1. As a gamer I want to edit the descriptions so that everyone can see the latest game information.
2. As a gamer I want to vote for my favorite games.
3. As a gamer I want to view games based on rating so that I can find the most popular ones.

Considerations

- For features that aren't required, like creating a new game, you can do it programmatically.
- You can use any technology of your choice, as long as it's implemented in either .NET, Javascript or Typescript – e.g.
  - WPF, ASP.NET MVC, Angular/Reactjs...or even a console app!
  - SQL Server/NoSql or in-memory database
  - WCF/REST services, if any
  - Third Party Libraries like NHibernate, EntityFramework, etc
  - Any other tool that you consider useful for this task.
- UI/UX Design is a good bonus, but we'll mainly review the code.

Submitting your code

When you have completed your puzzles, please ZIP your solution and forward it along with other projects and documents as required. Please include any instructions, if needed, for example, how to create the Database for the last puzzle.