Carbon Footprint

Question

Write an application that will display the carbon footprint for a – Bicycle, Car, and a Building. Your classes should be implementing the same contract to calculate the carbon footprint (Please pick a meaningful name for both the contract and the method[s] names)

The application should instantiate an object out of all these classes and put them into a list and then polymorphically invoke each instantiated object to calculate and report the associated carbon footprints.

The application should calculate the carbon footprints as follows:

- None for a bicycle (obviously ☺)
- 50 pounds of CO_2 x square footage of the building
- 20 pounds of CO_2 x one gallon of gas

Additional Notes:

- There are no unit tests or solution skeleton code provided to you for this assignment
- Please use your own judgment for good design – i.e. Use everything that you learned in the class so far such as OOP Pillars (encapsulation, inheritance, polymorphism), helper methods, properties, utility classes etc.
- Feel free to enhance this design by including more attributes and behaviors to these objects if you have the motivation and time to do so
- Please show the carbon footprint for each of the objects and make sure to post a screenshot of the running application along with your solution

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Developer Notes
- Please pay attention to the deadlines. Your commit timestamp should not be later than the hard deadline
- Before committing your changes please make sure
  - Your solution files build and run fine
  - ~~All the provided tests pass (you will not receive any credit for failing tests) – Please do **NOT** modify the unit tests by any means~~
  - ~~StyleCop does not give you any warnings (20% penalty)~~ A lot of folks reported issues with StyleCop, so we will come up with a manual code guideline doc soon
  - If any other document files other than the code files are required, then please make sure you included these as well
- Once you committed your changes, please test it one last time to make sure everything is ok
- Please send the github link to the location of your solution to me and to your TA

Deadlines
- For this assignment deadline is **10/30/2015 @ 4pm** and hard-deadline is **11/4/2015 @ 4pm.** Unfortunately assignments sent over after this deadline will not receive any credit