Task: inheritance and polymorphism – weight 5 %

Task: Consider a text file where each line contains the information as described below.

Id, amount of milk, type

Id: an integer (a unique number)

Amount of milk: double that indicates the number of litres per day.

Type: String which is either Goat, Cow or Jersey_Cow

For example:

1111, 22.3, Jersey_Cow.

Develop a GUI application that reads the text file and also receive from the user (in a textbox):

1. Price of cow's milk (New Jersey or normal Cow: price is the same) – per litre
2. Price of Goat's milk – per litre
3. Cost of vaccination for a single Cow (per year).
4. Cost of vaccination for Jersey Cow (per year).
5. Cost of vaccination for Goat (per year).

Assume the text file contains 10 lines. For each line, your application must create an object and store all objects in an array. After storing all objects in the array, the application displays the total profitability upon request from the user.

The profitability of a livestock is calculated as the income from milk minus the cost of vaccination.

Your application must demonstrate inheritance and polymorphisim.

Notice: for marking, you may be asked to demonstrate, explain and apply simple modifications to your code in class. This may impact allocated mark.

Marking criteria:

1. Simple, efficient and appropriate design – 30%
2. Demonstrating Inheritance: 30%
3. Polymorphism: 40%

Submission guidelines:

Zip the folder of the project and upload the zipped folder to the relevant link in moodle.