

ClassHeader.h

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1 /*****
2  * PROGRAMMER : Ali Eshghi & Julian Lasting
3  * STUDENT ID : 1112261 & 1097778
4  * CLASS      : CS1B
5  * SECTION    : MW 7:30pm
6  * LAB 14     : Farmer's Pete livestock(inheritance class)
7  * DUE DATE   : 13 December 2019
8  *****/
9
10 #ifndef CLASSHEADER_H_
11 #define CLASSHEADER_H_
12
13 #include<iostream>
14 #include<iomanip>
15 #include<string>
16 #include<fstream>
17 #include<limits>
18 #include<sstream>
19 using namespace std;
20
21 const int AR_SIZE = 3;
22
23
24
25 enum WoolType
26 {
27     LONG,
28     MEDIUM,
29     FINE,
30     CARPET
31 };
32
33
34 enum TailType
35 {
36     STRAIGHT,
37     CORKSCREW,
38     CURL_UP,
39     CURL_RIGHT,
40     CURL_LEFT
41 };
42
43
44
45
46
47 class Animal
48 {
49     //public part of the class that is available for outside of the class
50     public:
51         //constructor
52         Animal();
53
54         //destructor
55         ~Animal();
```

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```
56
57 //Method for adding a new animal's name.
58 void GetName(string name);
59
60 //Method for adding a new animal's age.
61 void GetAge(string age);
62
63 //method for changing the age
64 void changeAge();
65
66 //method for changing the name
67 void changeName();
68
69 //method(overload)for changing the name and age
70 void changeAgeName();
71
72 //method that returns the animal's name
73 string setName() const;
74
75 //method that returns the animal's age
76 int setAge() const;
77
78 //method for outputting the objects
79 void Display() const;
80
81 //method to get the list size of the animals in the list
82 int GetAnimalCount() const;
83
84
85
86 //private part only available for this class(in this case the attributes
87 // can be used in derived classes)
88 private:
89     string nameAr[AR_SIZE];
90     string ageAr[AR_SIZE];
91     int animalCount;
92 };
93
94
95 class Sheep: public Animal //derived class
96 {
97     //public part of the class that is available for outside of the class
98     public:
99         //constructor
100         Sheep();
101
102         //decosntructor
103         ~Sheep();
104
105         //method to get the name of the sheep from the file and put in array
106         void SetSheepName(string name);
107
108         //method to get the age of the sheep from the file and put in array
109         void SetSheepAge(string age);
110
```

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111     //method to set the wool type
112     void SetWool(WoolType wool);
113
114     //method to set the wool color
115     void SetWoolColor(string color);
116
117     //method to change the age for the sheeps
118     void ChangeSheepAge(string name);
119
120     //method to show the header for the diplay
121     void DisplayHeaderSheep() const;
122
123     //method to display the sheep
124     void DisplaySheep();
125
126     //method to get the wool type
127     WoolType GetWool() const;
128
129     //method that returns the size of the list of the sheeps
130     int GetSheepCount() const;
131
132
133     //private part only available for this class(in this case the attributes
134     //                                     can be used in derived classes)
135     private:
136         string nameAr[AR_SIZE] = {" "};
137         string ageAr[AR_SIZE] = {" "};
138         WoolType woolAr[AR_SIZE] = {LONG};
139         string colorAr[AR_SIZE] = {" "};
140         int sheepCount;
141
142
143 };
144
145
146
147
148 class Pig: public Animal
149 {
150     //public part of the class that is available for outside of the class
151     public:
152         //constructor
153         Pig();
154
155         //decosntructor
156         ~Pig();
157
158         //method to get the name of the pig from the file and put it in array
159         void SetPigName(string name);
160
161         //method to get the age of the pig from the file and put it in array
162         void SetPigAge(string age);
163
164         //method to set the tail Type
165         void SetTail(TailType tail);

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```
166
167 //method to show header for the display
168 void DisplayHeaderPig() const;
169
170 //method to display pig
171 void DisplayPig() const;
172
173 //method to get the tail type
174 TailType GetTail() const;
175
176 //method to change the age for pig
177 void ChangePigAge(string name);
178
179 //method that returns the size of the list of the sheeps
180 int GetPigCount() const;
181
182 //method for finding the Pig in the list
183 void FindPig(string) const;
184
185
186 //private part only available for the class
187 private:
188     string nameAr[AR_SIZE] = {"p"};
189     string ageAr[AR_SIZE] = {"0"};
190     TailType tailAr[AR_SIZE] = {STRAIGHT};
191     int pigCount;
192
193
194 };
195
196
197
198 #endif /* CLASSHEADER_H_ */
199
```