Homework 7

- Create a basic program that incorporates the INHERITANCE concept

- Every class has a default Constructor.
  - Tell user which class the constructor belongs to in the print screen, as see in the result screenshot

- Base class is called **Animal (Animal.h, Animal.cpp)**
  - Instances of animal class have these **private** data.
    STRING
    Species : what kind of animal it is
    Habitat: where it lives
    Food: what it normally eats
    Type: carnivore or herbivore
    INTEGER
    Weight: how much the animal weighs   *getter setter*
  - Create **mutator** and **accessor** functions **for each** private data above.
  - Create a **getInfo()** function that prints all the information as seen in the result screenshot.

Homework 7

- Subclasses **Herbivore** and **Carnivore** inherit Animal class.
  - Create Herbivore.h, Herbivore.cpp, Carnivore.h, Carnivore.cpp
  - Herbivores eat **grass** and Carnivores eat **meat**
  - In the default constructor of each Animal type call mutator function for FOOD appropriately.

- Create 2 functions in Herbivore and Carnivore class that **override** Animal
  - In the example screenshot, the functions are training and feeding, but you can be creative with these!

  - Don't forget to use
    ```
    #ifndef ANIMAL_H
    #define ANIMAL_H
    #endif
    ```
    appropriately for header files

- In the main class, create instances of Herbivore and Carnivore, and use the inherited functions from Animal.

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Main.cpp

```cpp
#include "carnivore.h"
#include "herbivore.h"
#include <iostream>
#include <string>
using namespace std;

int main()
{
    Carnivore animalOne = Carnivore();
    animalOne.
    animalOne.
    animalOne.             Fill in
    animalOne.
    animalOne.
    animalOne.
    animalOne.

    cout << endl;
    Herbivore animalTwo = Herbivore();
    animalTwo.
    animalTwo.
    animalTwo.             Fill in
    animalTwo.
    animalTwo.
    animalTwo.
    animalTwo.

    system("pause");
    return 0;
}
```

Result Example

```
D:\2017\2017-2\C++\hw7\hw7\Debug\hw7.exe

This is Animal Class Constructor
This is Carnivore constructor
I am a Tiger
I eat meat
I am a Carnivore!
I weigh 80Kg
I live in the Mountain
Carnivore was fed well with meat
Carnivore ran trained in axe throwing

This is Animal Class Constructor
This is Herbivore constructor
I am a Deer
I eat grass
I am a Herbivore!
I weigh 40Kg
I live in the Savanna
Herbivore was fed well with grass
Herbivore was trained in Juggling
Press any key to continue . . .
```

Homework 7

- How to submit.
    - Download the template for homework from class board in HisNet, and write report.
    The report should include
        1. Codes with comments
            Especially methods you created and the overridden functions.
        2. 'Screen shot of the result'
    - Submit 'report' and 'codes' in zip file.
    Please follow the file naming rule. *HW7_(Student Number) _(Name).zip*
    ex: HW7_201101234_HongGilDong.zip
    - Upload it to HisNet.

- Deadline: 11.16 (Thursday), 23:00