C++ Programming	Student number	21600193
Homework 7	Name	Kim, Hyo Rim

1. Comments

1) Animal.cpp & Animal.h

Define the attributes that apply equally to both Carnivore and Herbivore.

2) Carnivore.cpp & Carnivore.h & Herbivore.cpp & Herbivore.h

Inherit the animal's attributes and add properties for each type.

3) Main.cpp

Use the library to access each animal type, define attributes, and then print.

2. Code

Animal.cpp

```
#include <iostream>
#include <string>
#include "Animal.h"
using namespace std;
		Animal::Animal(string species, string food){
			this->species = species;
			this->food = food;
			cout << "This is Animal Class Contructor" << endl;
		}
		string Animal::getSpecies(){
			return this->species;
		}
		string Animal::getHabitat(){
```

```
	return this->habitat;
}
void Animal::setHabitat(string habitat){
	this->habitat = habitat;
}
string Animal::getFood(){
	return this->food;
}
string Animal::getType(){
	return this->type;
}
void Animal::setType(string type){
	this->type = type;
}
int Animal::getWeight(){
	return this->weight;
}
void Animal::setWeight(int weight){
	this->weight = weight;
}
void Animal::getInfo(){
	cout<< "I eat "<< food <<endl;
	cout<< "I am a "<< species <<endl;
	cout<< "I weight "<< weight <<endl;
	cout<< "I live in the "<< habitat <<endl;
	cout<<species<< " was fed well with "<< food <<endl;
```

```
                cout<<species<< " was trained in "<< type <<endl;

        }
```

Animal.h

```
#ifndef Animal_H

#define Animal_H

#include <string>

#include <iostream>


using namespace std;


class Animal{


    private:

        string species;

        string habitat;

        string food;

        string type;


        int weight;


    public:

        Animal(string species, string food);


        string getSpecies();
```

```
        string getHabitat();

        void setHabitat(string habitat);

        string getFood();

        string getType();

        void setType(string type);

        int getWeight();

        void setWeight(int weight);

        void getInfo();

};

#endif
```

Carnivore.cpp

```
#include <iostream>
#include <string>
#include "Animal.h"
#include "Carnivore.h"
```

```
using namespace std;

Carnivore::Carnivore():Animal("Carnivore", "Meat"){

    cout << "This is Carnivore constructor" << endl;

}

Carnivore::~Carnivore(){cout<<"";}

void Carnivore::getInfo(){

    cout << "I am a " << name <<endl;

    Animal::getInfo();

}

void Carnivore::setName(string name){

    this->name = name;

}
```

Carnivore.h

```
#ifndef Carnivore_H

#define Carnivore_H



#include <iostream>

#include <string>

#include "Animal.h"



using namespace std;



class Carnivore:public Animal{



        private:

                string name;



        public:



                Carnivore();



                ~Carnivore();



                void getInfo();



                void setName(string name);



};
```

```
#endif
```

Herbivore.cpp

```
#include <iostream>

#include <string>

#include "Animal.h"

#include "Herbivore.h"


using namespace std;



		Herbivore::Herbivore():Animal("Herbivore", "Grass"){


			cout << "This is Herbivore constructor" << endl;


		}


		Herbivore::~Herbivore(){cout<<"";}


		void Herbivore::getInfo(){


			cout << "I am a " << name <<endl;


			Animal::getInfo();
```

```
}

void Herbivore::setName(string name){
	this->name = name;
}
```

Herbivore.h

```
#ifndef Herbivore_H
#define Herbiivore_H

#include <iostream>
#include <string>
#include "Animal.h"

using namespace std;

class Herbivore:public Animal{

	private:
		string name;

	public:

		Herbivore();
		~Herbivore();
```

```
        void getInfo();


        void setName(string name);
};
#endif
```

Main.cpp

```
#include "Carnivore.h"
#include "Herbivore.h"
#include <iostream>
#include <string>

using namespace std;

int main(){
    Carnivore animalOne = Carnivore();
    animalOne.setName("Tiger");
    animalOne.setWeight(80);
    animalOne.setHabitat("Mountain");
    animalOne.setType("axe throwing");
    animalOne.getInfo();
    cout << endl;
    Herbivore animalTwo = Herbivore();
    animalTwo.setName("Deer");
    animalTwo.setWeight(40);
    animalTwo.setHabitat("Savanna");
```

```
        animalTwo.setType("Juggling");

        animalTwo.getInfo();

        system("pause");

        return 0;

}
```

3. Result