Clint Kline

C++

11-13-2021

Week 5 Hands-On

Chapter 10 Exercise 3:

3. Find the syntax errors in the following class definition.

#include <iostream>

using *namespace* std;

*int* main()

{

*class* syntaxErrors2 *// Line 1*

    { *// Line 2*

*public:                 // Line 3*

*bool* canGraduate(); *// Line 4*

*void* print() *const*; *// Line 5*

*// void syntaxErrors2(int = 0, double = 0); // correction: old Line 6*

        syntaxErrors2() { ID = 0, gpa = 0; }; *// new Line 6*

*private:        // Line 7 << correction: replaced semicolon with a colon*

*int* ID; *// Line 8*

*double* gpa; *// Line 9*

*// Line 10*

    };

    return 0;

};

Chapter 11 Exercise 2:

Suppose animal is a class that defines the basic properties of an animal. Draw a class hierarchy in which several classes are derived from the class animal, and then other classes are derived from the classes derived from the class animal.

*// Author: Clint Kline*

*// Filename: Wk5Ch11Ex2.cpp*

*//*

#include <iostream>

#include <string>

using *namespace* std;

*class* animalType

{

*public:*

*int* weight;

*int* heightLength;

*char* sex[2] = {'m', 'f'};

    string habitat[5] = {"TROPICAL", "DRY", "TEMPERATE", "CONTINENTAL", "POLAR"};

    string category[6] = {"MAMMAL",

                          "BIRD",

                          "FISH",

                          "REPTILE",

                          "AMPHIBIAN",

                          "INSECT"};

*class* mammalType

    {

*public:*

*int* legs;

*bool* subterranean;

        string footType[3] = {"HOOF",

                              "PAW",

                              "FIN"};

*class* lion

        {

*bool* mature;

        };

*class* blueWhale

        {

*bool* previouslyUntagged;

        };

*class* ram

        {

*double* hornSpread;

        };

    };

*class* birdType

    {

*public:*

*bool* flight;

*bool* aquatic;

*bool* migratory;

*class* canadaGoose

        {

*bool* transcontinental;

        };

*class* africanOstrich

        {

*bool* somali;

        };

*class* emperorPenguin

        {

*bool* parent;

        };

    };

*class* fishType

    {

*public:*

        string waterType[4] = {"SALT",

                               "FRESH",

                               "BRACKISH",

                               "AOTA"}; *//<< AOTA = ALL OF THE ABOVE*

*class* trout

        {

*bool* native;

        };

*class* whaleShark

        {

*bool* symbiotic;

        };

*class* sockeyeSalmon

        {

*bool* mature;

        };

    };

*class* reptileType

    {

*public:*

*bool* eggBirth;

*bool* venomous;

*class* skink

        {

*bool* limbed;

        };

*class* timberRattlesnake

        {

*bool* possibleCanebreak;

        };

*class* komodoDragon

        {

            string island[4] = {"KOMODO", "RINCA", "FLORES", "GILIMOTANG"};

        };

    };

*class* amphibianType

    {

*public:*

*bool* aquatic;

*bool* internalEggs;

*bool* venomous;

        string order[3] = {"FROGTOADS",

                           "CAECILIANS",

                           "SALAMANDERNEWTS"};

*class* hellbender

        {

*bool* mature;

        };

*class* Caecilian

        {

*bool* venomous;

        };

*class* surinameToad

        {

*bool* pregnant;

        };

    };

*class* insectType

    {

*public:*

*bool* flight;

*bool* aquatic;

*bool* subterranean;

*class* goliathBeetle

        {

            string stage[3] = {"LARVAL", "PUPAL", "MATURE"};

        };

*class* dragonFly

        {

*double* wingspan = 0.0;

        };

*class* yellowJacket

        {

*bool* queen;

        };

    };

};