**Topic 4: Objects in Arrays and Lists**

Top of Form

Bottom of Form

**Content**

**List of Class Type Objects**

[List of Class Type Objects](https://dmacc.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_102593_1&content_id=_7286783_1)

Recall using List collection. A  List is not limited to built-in datatypes, you can have a list of objects, such as a class Dog:

List<Dog> dogList = new List<Dog>(); // note keyword new in front of constructor call

You were already using constructors, too!



**Arrays of Objects**

A picture containing grass, dog, outdoor, mammal

Description automatically generated

A List is the collection Class that is implemented in C#. You can use arrays as well:

const int max = 5; // Avoid magic number with array

Dog[] dogList = new Dog[max];

Or use the alternative of initializing the array when you declare it.

Dog[] dogList = {

new Dog("Poodle", "Angel", 5),

new Dog("Labrador", "Cocoa", 60),

new Dog("CatDog", "Leo", 55),

new Dog("Corgi", "Maisy", 35),

new Dog("Poodle", "Maggie", 7)

};

Without seeing the Dog class, can you guess what the properties are? Discuss on the weekly discussion board!

[**Console App: Class using a Collection of Objects**](https://dmacc.blackboard.com/webapps/assignment/uploadAssignment?content_id=_7286794_1&course_id=_102593_1&group_id=&mode=view)

Using the House class , write a driver to make a List or array of 5 objects of type House. Use the Dog example above.

Print the List or array of House objects, calling the ToString() method.

Submit House.cs with comments but no Academic Honesty Header and Program.cs with Academic Honesty Header included.

This is 20 points.

**House class**

[House class](https://dmacc.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_102593_1&content_id=_7286783_1)

public class House {

// fields

private string \_address;

private int \_numberBedrooms;

private int \_numberBathrooms;

// Constructors

public House() // default no-arg

{

Address = "";

NumberBedrooms = 0;

NumberBathrooms = 0;

}

public House(string address, int numberBathrooms, int numberBedrooms)

{

Address = address;

NumberBathrooms = numberBathrooms;

NumberBedrooms = numberBedrooms;

}

//Properties with public access to set and get values

public string Address { get => \_address; set => \_address = value; }

public int NumberBedrooms { get => \_numberBedrooms; set => \_numberBedrooms = value; }

public int NumberBathrooms { get => \_numberBathrooms; set => \_numberBathrooms = value; }

public override string ToString()

{

return ("House at " + Address + " has " + NumberBedrooms + " bedrooms and " + NumberBathrooms + " bathrooms.");

}

}