



CSE 215: Programming Language II Lab

Faculty - ABH3

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Lab – 10: Inheritance & Polymorphism

Objective:

- To understand inheritance
- To understand polymorphism

<div> Plant </div> <div> - name: String - color: String </div> <div> /* constructor */ /* accessor-mutator */ /* toString */ </div>	<div> Flower extends Plant </div> <div> - hasSmell: boolean - hasThorn: boolean </div> <div> /* constructor */ /* accessor-mutator */ /* toString */ </div>
<div> Herb extends Plant </div> <div> - isMedicinal: boolean - season: String </div> <div> /* constructor */ /* accessor-mutator */ /* toString */ </div>	

Under MainClass implement following methods :

static void add(Plant [] plants, Plant p) // to add new plant object into the array

static Plant [] remove(Plant [] plants, String n) // remove a plant given its name

static Plant search(Plant [] plants, String n) // search for a plant given its name

static void display(Plant [] plants) // display all Plant objects

In the main method, **create an array of Plant objects** and invoke the above methods. Some of the Plant objects **should achieve the properties of Polymorphism by upper casting** Flower and Herb classes to Plant object.

Note : In chile classes, **override the toString()** method to show plant name, plant color along with class properties. **Create a static variable length to trace the size of the array.**