

**North South University**  
**Department of Electrical and Computer Engineering**  
**CSE 215L: Programming Language II Lab**

**Lab – 10: Inheritance & Polymorphism**

**Objective:**

- To understand inheritance
- To understand polymorphism

<table><tr><th>Plant</th></tr><tr><td><pre>- name: String - color: String</pre></td></tr><tr><td><pre>/* constructor */ /* accessor-mutator */ /* toString */</pre></td></tr></table>	Plant	<pre>- name: String - color: String</pre>	<pre>/* constructor */ /* accessor-mutator */ /* toString */</pre>	<table><tr><th>Flower extends Plant</th></tr><tr><td><pre>- hasSmell: boolean - hasThorn: boolean</pre></td></tr><tr><td><pre>/* constructor */ /* accessor-mutator */ /* toString */</pre></td></tr></table>	Flower extends Plant	<pre>- hasSmell: boolean - hasThorn: boolean</pre>	<pre>/* constructor */ /* accessor-mutator */ /* toString */</pre>
Plant							
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Flower extends Plant							
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<table><tr><th>Herb extends Plant</th></tr><tr><td><pre>- isMedicinal: boolean - season: String</pre></td></tr><tr><td><pre>/* constructor */ /* accessor-mutator */ /* toString */</pre></td></tr></table>	Herb extends Plant	<pre>- isMedicinal: boolean - season: String</pre>	<pre>/* constructor */ /* accessor-mutator */ /* toString */</pre>				
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In main method, create an array of Plant objects and implement these methods:

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

static void 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