

# APCS – Mr. Ascione

## Horse Farm

**OBJECTIVE:** This lab was derived from an actual AP Free Response question. It will test your ability to build a class that implements an interface as well as build classes and methods around it.

**SPEC:** First, read the AP question carefully. It is important to understand the framework of the question before you consider writing any code. Next, see if you can implement the two methods from part a and part b on paper... this is what you will be doing on the actual exam.



AP is giving you the Horse interface. They do not discuss a Horsey class – however, we know that HorseBarn contains a Horse[ ] and we know we cannot instantiate an interface... but we can implement one. Horsey therefore will implement the Horse interface and then if you look at the client code (HorseBarnRunner) you'll notice we instantiate each Horse as a Horsey:

```
Horse trigger = new Horsey("Trigger", 1340);
```

These Horsey's can then be added to the Horse array since a Horsey is a Horse...

```
Horse[] horses = {trigger, one, silver, lady, four, patches, duke};
```

of course, unless of course that horse is the famous Mr. Ed!... but I digress ☺

In summary, you have all of the interface (Horse.java) and all of the client (HorseBarnRunner.java)... now you need to 1) Implement the interface - *Horsey.java*, and 2) Complete all of the methods outlined in *HorseBarn.java*.

**OUTPUT:** Your finished output should look as below.  
Alright, enough “Horsing Around” let’s get to work! ☺

```
C:\Windows\system32\cmd.exe

Mr A's Horse Farm BEFORE Consolidation:
Horses on the farm:

Trigger Weight = 1340
Empty Stall
Silver Weight = 1210
Lady Weight = 1575
Empty Stall
Patches Weight = 1350
Duke Weight = 1410

Mr A's Horse Farm AFTER Consolidation:
Horses on the farm:

Trigger Weight = 1340
Silver Weight = 1210
Lady Weight = 1575
Patches Weight = 1350
Duke Weight = 1410
Empty Stall
Empty Stall

Press any key to continue . . .
```

### Files Needed:

```
Horse.java
Horsey.java
HorseBarn.java
HorseBarnRunner.java
```