

## Lab 2

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### Questions:

1. We should choose to add equipment e because it ensures that any subsets of the equipment class can be added. Without this we would be unable to reuse this class to add chairs or stools, etc.
2. A string in the hashmap will allow us to use a universal entry that indicates a category of item stored in the array. If we were to use the class itself as an identifier key that it would always create a new key value pair as no two objects of the same class will have the same identifier. It would record the unique pointer as the key entry. Thus in order to keep a tally some other indicator as a string is necessary.
3. Using the Integer type is a wrapper class for the datatype int. this can allow us to treat the primitive datatype as an object. This allows us to use different methods offered by the util library. We could assign the null value to an integer instead of incrementing it to zero if we wanted to indicate that it does not exist yet to add a distinction between existing and the number zero.
4. This Allows us to format the contents of the string if needed. The default method would just write the title of the class followed by an @ symbol with the hash code of the object. This would not correctly return the contents of the Hashmap on the equipment list. It would return a set of key value pairs in the list if you were to use the .toString() method on the inventoryCount field if you needed to retrieve the contents of that hash map (it will not be formatted to the requirements of the lab).
5. This would cause a compile time error as the parent does not inherit attributes from children. Since the Parent class is only expecting items of type equipment it wont know of any children methods that it can access at compile time. And thus will throw a compile time error. You would need to type cast the object type first in order to access the method that it uses.