CSE1720

Week 10, Lecture 18

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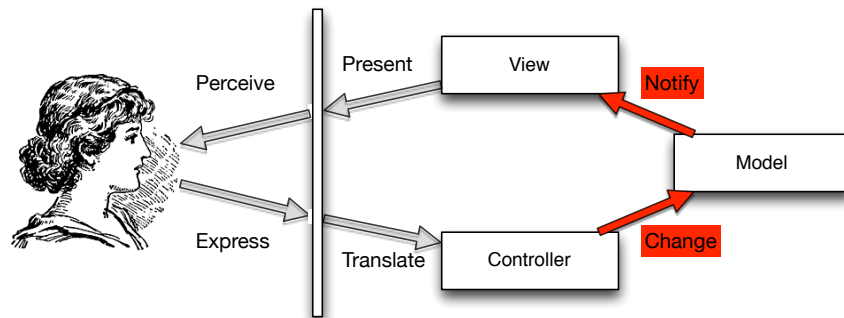Winter 2014 ◆ Thursday, Mar 13, 2014

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General Info

- Are your preparations underway for Term Test #2?
  - scheduled: Thu Mar 20
  - covers Chapter 9, Chapter 10, concepts from codebase

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Schematic of MVC

Perceive

Present — View — Notify

Express

Translate — Controller — Change

Model

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Ch 10 Review Questions

#1 Why do we need the collection framework?

#2 What are the three main interfaces in the framework?

#3 Name the classes that implement each interface and state which is used when.

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Ch 10 Review Questions

#4 Why do we specify the type when creating a collection? Why not leave it `Object`?

#5 Consider the types `List<CreditCard>` and `List<RewardCard>`. Is it true that one of them extends the other?

#6 A method takes as its parameter `Set<? Extends CreditCard>`. Can we pass to it the set `Set<RewardCard>`?

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Ch 10 Review Questions

#7 How do you add an element to a list? What happens if the element is already present?

#8 How do you add an element to a set? What happens if the element is already present?

#9 How do you add an element at the end of a list? How about at the beginning?

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Ch 10 Review Questions

#10 How do you add an element at the end of a set?

#11 What happens if you try to remove an elements from a set but the element is not in it?

#12 Given a reference to a map Map<K,V>, how do you determine whether a given key is in it?

#13 Why do we need an iterator?

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Ch 10 Review Questions

#14 What methods does the iterator have?

#15 How do you force an iterator to reset its position back to the first element?

#16 How do you iterate over a map?

#17 Explain the enhanced for loop by giving an example.

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Ch 10 Review Questions

#18 Given a reference to a map `Map<K,V>`, how do you determine its elements?

#19 What is the syntax for invoking the sort method?

#20 What is natural order?

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Ch 10 Review Questions

#21 Is it possible to sort `List<Equation>`?

#22 Is it possible to sort `List<InputStream>`?

#23 Explain the loop invariant of a linear search.

#24 Give an example from everyday life in which we search faster than O(N) when the list being searched is sorted.

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Ch 10 Review Questions

#25 What is the syntax for invoking the binary search method?

#26 What is the complexity of binary search?

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