

Generating Random Text

Module Learning Outcomes / Resources	10 min
Introduction	5 min
Order-Zero, Order-One	6 min
Finding Follow Set	7 min
Implementing Order-Two	9 min
Testing and Debugging	7 min
Programming Exercise: Generating Random Text	10 min
<b>Practice Quiz:</b> Generating Random Text	7 questions
Interfaces and Abstract Classes	9 min
Summary	2 min
Programming Exercise: Interface and Abstract Class	10 min
<b>Practice Quiz:</b> Interface and Abstract Class	4 questions

Word N-Grams

Review

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0:02

We've just gone through several related programs and classes to learn some new Java concepts in the context of the useful idea of predictive and random text.

0:14

By developing a sequence of related classes and programs, we could introduce new Java and design ideas in the context of a new programs. In our example, we used Markov text generation. These ideas help form the basis for machine learning algorithms, such as those used for spam detection and for predictive and autocomplete functionality in search engines and mobile smart phones.

0:39

We studied related classes that led to designing interfaces and abstract based classes to overcome problems of copying and pasting code across several classes.

0:50

The familiar context helped facilitate the exploration of these new Java and object oriented concepts. We looked in more depth at Java interfaces in looking at the comparable interface for sorting. First we used the same names for methods across many classes, this allowed us to reuse client or testing code with new classes. The testing code compiled with different classes, because the method names were the same.

1:18

We first developed MarkovZero, but the design of MarkovTwo, and MarkovOne, was facilitated by reusing ideas and method names from the already tested MarkovZero class.

1:32

We extended the idea of common method names in creating an interface we named IMarkovModel.

1:39

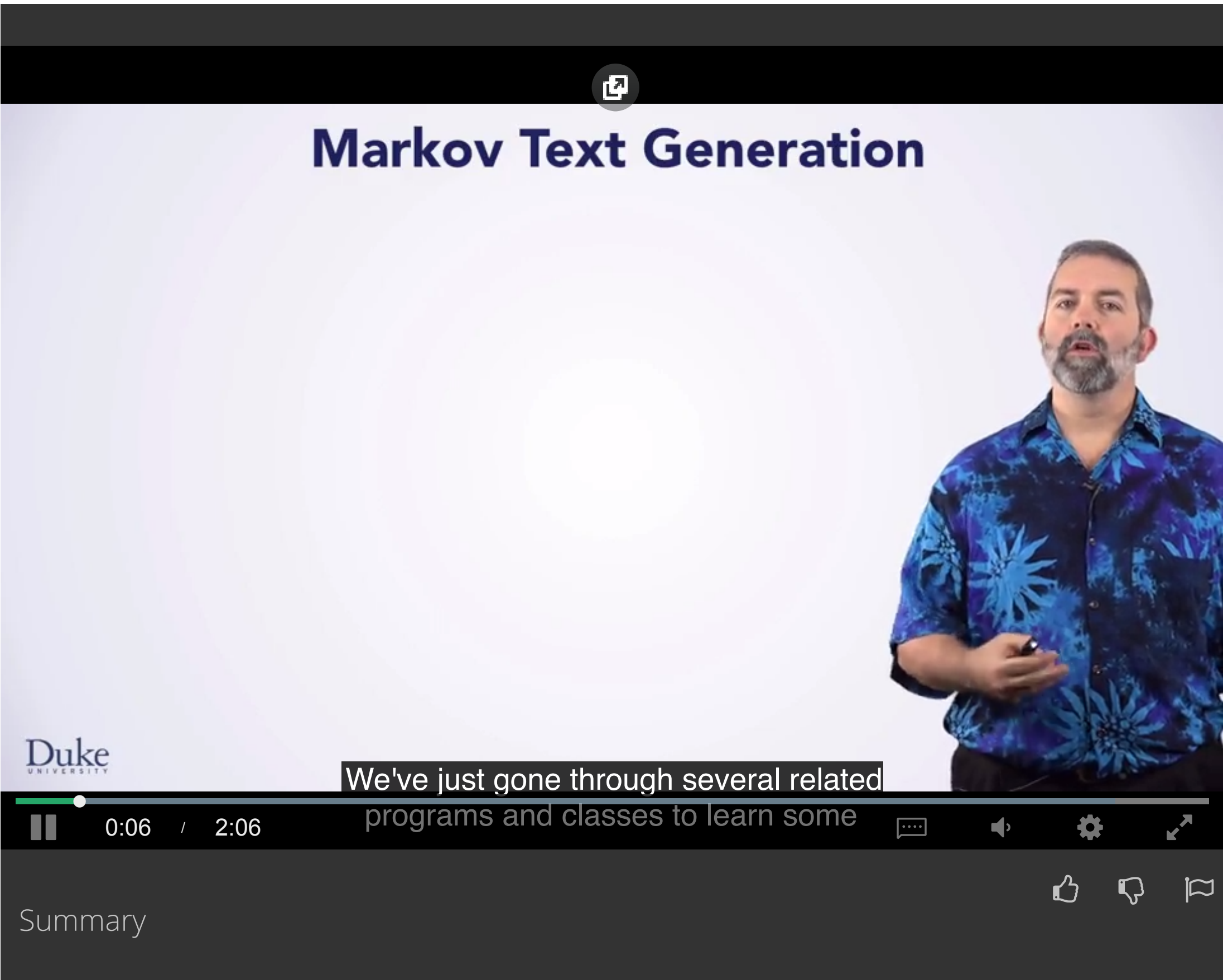
Interfaces are a powerful concept in Java and other object oriented languages. Interfaces are used extensively in the Java.util, Java.io, and other packages and libraries.

1:52

We extended these ideas to creating an abstract base class for Markov.

1:58

This allowed us to capture common code not just method names as we captured by creating an interface.



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