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Course Info



Deadline: You must submit this week's assignments by **March 18, 2018, 11:59 PM PST**.

THIS WEEK'S FORUM

Week 2

Welcome to the course discussion forums! Ask questions, debate ideas, and find classmates who share your goals. Browse popular threads below or other forums in the sidebar.

Go to forum

Strings in Java



This module begins with a short presentation from Raluca Gordân, an assistant professor in Duke University's Center for Genomic and Computational Biology, about an important problem genomics scientists encounter regularly: how to identify genes in a strand of DNA. To tackle this problem, you will need to understand strings: series of characters such as letters, digits, punctuation, etc. After learning about Java methods that work with strings, you will be able to find genes within a DNA string as well as tackle other string related problems, such as finding all of the links in a web page. By the end of this module, you will be able to: (1) Use important methods for the Java String class; (2) Use conditionals, for loops, and while loops appropriately in a Java program; (3) Find patterns in the data represented by strings to help develop the algorithm for your program; (4) Understand the importance of designing programs that keep different data processing steps separate; (5) Use the `StorageResource` iterable for this course to store some data for further processing; and (6) Rely on Java documentation to better understand how to use different Java packages and classes.

 Less



Finding a Gene in DNA



What is a String 2 min



Understanding Strings 3 min



Developing an Algorithm 5 min



Positions in Strings 8 min



Translating into Code 11 min



Java Math 8 min



Programming Exercise: Finding a Gene and Web Links 10 min



Practice Quiz:

Finding a Gene in DNA 6 questions

Finding All Genes in DNA



Introduction 48 sec



Conceptual Understanding 4 min



While Loops 9 min



While Loop Syntax and Semantics 3 min



Coding While Loops 6 min



Three Stop Codons 5 min



Coding Three Stop Codons - Part I 7 min

Resume



Coding Three Stop Codons - Part II 4 min



Logical And / Or 8 min



Coding And / Or 6 min



Finding Multiple Genes 5 min



Translating to Code 8 min



Programming Exercise: Finding Many Genes 10 min



Practice Quiz:

Finding All Genes in DNA 4 questions

Debugging Code



Practice Quiz:

Debugging: Part 1 12 questions



Practice Quiz:

Debugging: Part 2 11 questions



Discussion Prompt:

Debugging First Steps 5 min

Using the StorageResource Class



Separation of Concerns 5 min



StorageResource Class 3 min



Coding StorageResource Class 4 min



Programming Exercise: Storing All Genes 10 min



Practice Quiz:

Using StorageResource 6 questions

Review



Quiz:

Strings in Java 7 questions

Due March 18, 11:59 PM PDT



End of Module Survey 10 min