

# Bioinformatics

Homework Chapter 1

# Locations

Rosalind is a platform for learning bioinformatics and programming through problem solving. [Take a tour](#) to get the hang of how Rosalind works.

If you don't know anything about programming, you can start at the [Python Village](#). For a collection of exercises to accompany Bioinformatics Algorithms book, go to the [Textbook Track](#). Otherwise you can try to storm the [Bioinformatics Stronghold](#) right now.



Python Village

If you are completely new to programming, try these initial problems to learn a few basics about the Python programming language. You'll get familiar with the operations needed to start solving bioinformatics challenges in the Stronghold.



Bioinformatics Stronghold

Discover the algorithms underlying a variety of bioinformatics topics: computational mass spectrometry, alignment, dynamic programming, genome assembly, genome rearrangements, phylogeny, probability, string algorithms and others.



Bioinformatics Armory

Ready-to-use software tools abound for bioinformatics analysis. Whereas in the Stronghold you implement algorithms on your own, in the Armory you solve similar problems by using existing tools.

**Bioinformatics Textbook Track**

A collection of exercises to accompany Bioinformatics Algorithms: An Active-Learning Approach by Phillip Compeau & Pavel Pevzner. A full version of this text is hosted on [stepic.org](http://stepic.org)

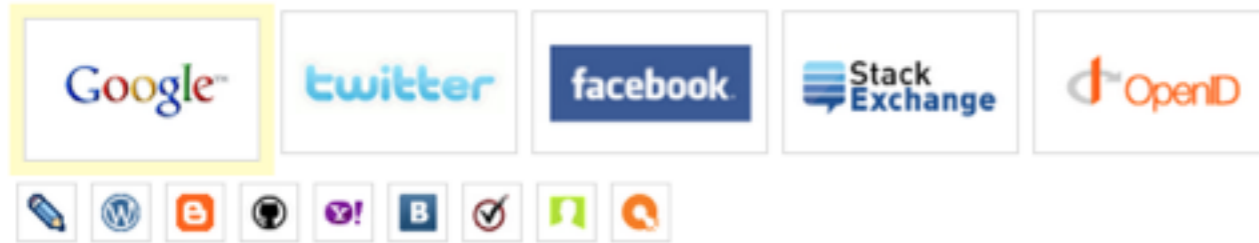


Algorithmic Heights

A collection of exercises in introductory algorithms to accompany "Algorithms", the popular textbook by Dasgupta, Papadimitriou, and Vazirani.

## Log in with OpenID

Do you already have an account on one of these sites? Click the logo to log in with it here:



### Why OpenID?

OpenID is service that allows you to log in to many different websites using a single identity. Find out [more about OpenID](#) and [how to get an OpenID enabled account](#).

### Want to use with an existing account?

If the existing account's email address matches your OpenID login, we will attempt to link the two. Otherwise, sign in with the existing account, click your username at the top of the page, then click the [my accounts](#) to load the page for associating new OpenID accounts.

## Log in with a Rosalind account

Username:

Password:

### Forgot your Rosalind account information?

[Click here](#) to have an email sent with your username, along with instructions on how to reset your password.

### Don't receive an activation e-mail?

[Click here](#) to re-send an activation e-mail.

### Don't have a Rosalind account?

[Click here](#) to create a Rosalind account.

[Found a typo?](#) [Suggest a new problem](#) [Take a tour](#)

<http://rosalind.info/problems/locations/>

# Soft deadline 24.09.15

# Hard deadline 01.10.15

## Tasks BA1A - BA1N

Choose 10 out of 14, can complete all for bonus

BA1A	Compute the Number of Times a Pattern Appears in a Text	62	<input checked="" type="checkbox"/>
BA1B	Find the Most Frequent Words in a String	217	<input checked="" type="checkbox"/>
BA1C	Find the Reverse Complement of a String	193	<input checked="" type="checkbox"/>
BA1D	Find All Occurrences of a Pattern in a String	170	<input checked="" type="checkbox"/>
BA1E	Find Patterns Forming Clumps in a String	128	<input type="checkbox"/>
BA1F	Find a Position in a Genome Minimizing the Skew	125	<input checked="" type="checkbox"/>
BA1G	Compute the Hamming Distance Between Two Strings	61	<input checked="" type="checkbox"/>
BA1H	Find All Approximate Occurrences of a Pattern in a String	117	<input checked="" type="checkbox"/>
BA1I	Find the Most Frequent Words with Mismatches in a String	83	<input type="checkbox"/>
BA1J	Find Frequent Words with Mismatches and Reverse Complements	73	<input checked="" type="checkbox"/>
BA1K	Generate the Frequency Array of a Strings	77	<input checked="" type="checkbox"/>
BA1L	Implement PatternToNumber	78	<input checked="" type="checkbox"/>
BA1M	Implement NumberToPattern	75	<input checked="" type="checkbox"/>
BA1N	Generate the d-Neighborhood of a String	68	<input checked="" type="checkbox"/>

<http://rosalind.info/problems/list-view/?location=bioinformatics-textbook-track>

# Submit

Submit to Rosalind

Link to Rosalind class link will appear to

<https://courses.cs.ut.ee/2015/bi/fall> by tomorrow  
(18.09) evening!