

# Unix, Perl, and Python

## Session 1: Introduction to Unix and LSF

### Exercise 2

Goal: Create a shell script to automate the first BLAST exercise in this class: The script will accept any sequence file, run BLAST and parse the BLAST output.

Note: Answers are in Courier font.

1	<p>The X Windows System provides a graphical user interface (GUI) for computers. Mac comes with the program X11, an X windows program. If you are using Mac, open terminal with</p> <p>Go-&gt;Utilities-&gt;Terminal, and login to tak with <code>ssh -Y username@tak</code> -Y option will allow you to use X windows.</p> <p>For the PC, we use two software products: Xming and PuTTY. Xming is an X Window Server, which can display tak GUI programs on your local desktop. PuTTY is a free SSH client, which allows you to connect to tak. X server (Xming) must be started before setting up a SSH connection with PuTTY. Refer to the website on how to connect your PC to tak: <a href="http://jura.wi.mit.edu/bio/education/docs/ssh-sftp.php">http://jura.wi.mit.edu/bio/education/docs/ssh-sftp.php</a></p>
2	<p>Go to your unix-exercise directory created in the last exercise. <code>cd unix-exercise</code></p>
3	<p>Copy the starting file from BaRC_Public to your working directory. <code>cp /nfs/BaRC_Public/Unix_Perl_Python/Unix/blast_seqs.sh.</code></p>
4	<p>Check the file permission of blast_seqs.sh. <code>ls -l blast_seqs.sh</code> In order to make the shell script run, you need to add execute permission to this script. How would you add it? <code>chmod u+x blast_seqs.sh</code></p>
5	<p>Several editors have been installed on tak: gedit, nedit and xemacs. You can open blast_seqs.sh with any one of them. For example, to use gedit, just type <code>gedit blast_seqs.sh &amp;</code> The '&amp;' allows you to continue using your terminal window and the editor at the same time.</p>
6	<p>Finish steps 3 to 5 as described in the blast_seqs.sh file.</p>
7	<p>Submit your finished script to the cluster <code>bsub blast_seqs.sh seq.fa</code> Check the job status with <code>bjobs</code>, and you will receive an email once the job finishes.</p>