CSC345 Discussion 1

Using turnin and review problems from CSC245

Using Lectura to Turn in Projects

We will be using lectura this semester to turn in projects. The program in lectura that we will mainly be using is **turnin**.

There are a number of ways to access lectura depending on what OS you use.

Mac and Linux users can use their built in terminal to gain access.

Windows users will have to use another ssh client.

Applications to Access Lectura

Mac and Linux Users

Mac and Linux users can use a built in application **terminal** to gain access into lectura.

Windows Users

For Windows users you will need to download a SSH client, the one I would suggest would be **putty**. Putty can be downloaded for free here.

https://www.putty.org

Gaining Access to Lectura

Mac and Linux Users

In your terminal application type the command

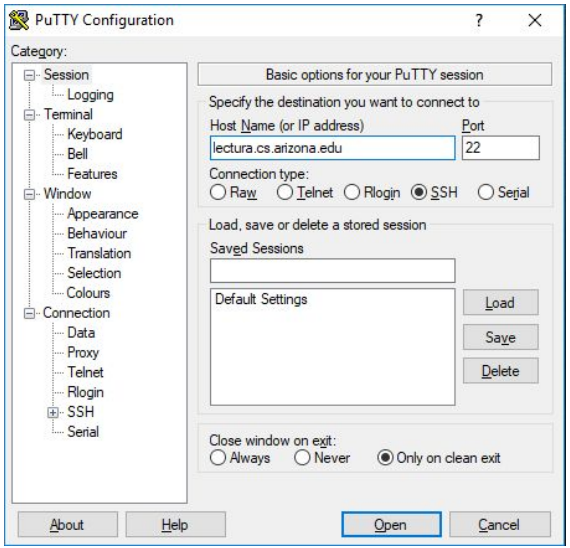
ssh *username*@lectura.cs.arizona.edu

You will then be prompted for a password, or if this is your first time using lectura it may ask you to create one. Follow those instructions.

Your ***username*** is normally your netid. The name used for your University email.

Windows Users

Here is the configuration you can use for **putty**. Follow the prompt after gaining access.



Moving Files to Lectura

Mac and Linux Users

In terminal you can use the scp command to transfer files to lectura like this.

scp fileToTransfer *username*@lectura.cs.arizona.edu/directory

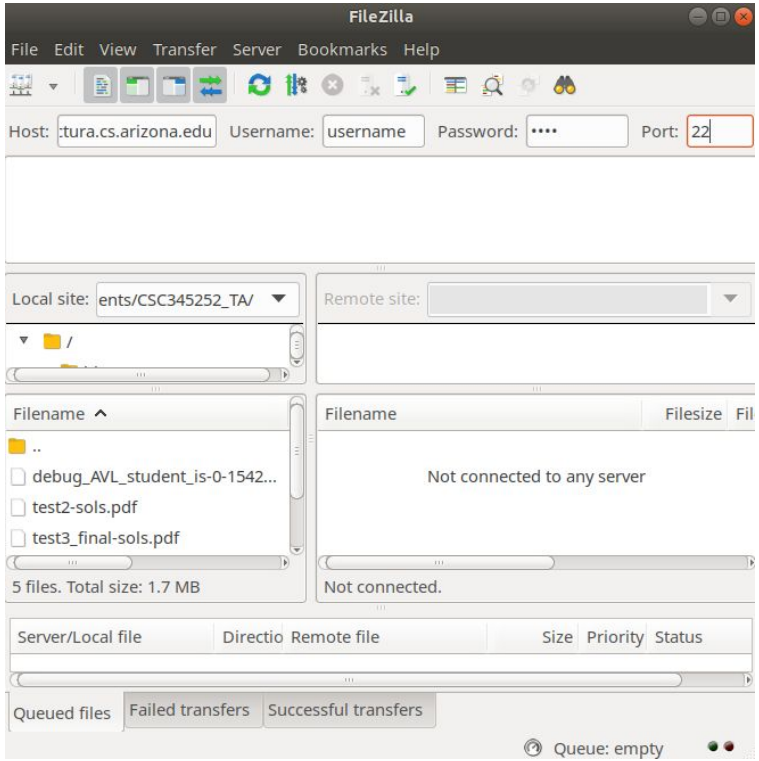
scp *username*@lectura.cs.arizona.edu/fileToGet .

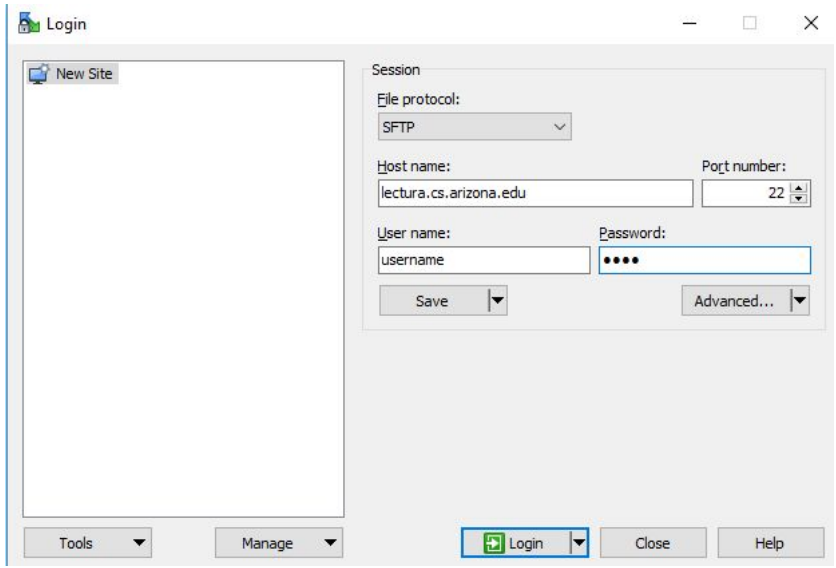
Or if you prefer a GUI you can use a scp application like FileZilla, which can be downloaded for free here https://filezilla-project.org/

Windows Users

You will need a scp application. I would suggest using WinSCP which can be downloaded for free here https://winscp.net/eng/download.php

SCP Configurations





Using Lectura

While in lectura Mac, Linux, and Windows users will use the same commands. Some useful commands (likely the only ones that you will need for this class):

ls: list the contents of the current directory.

cd *directoryName*: change the directory. *directoryName:* name of a valid directory.

mv *nameToMove destination*: move the file *nameToMove* to the directory *destination*.

mkdir *dirName:* create a directory named *dirName.*

turnin *destination fileToTurnIn1 fileToTurnIn2:* You will use this command to turn in your projects, the *destination* will be given in the project. Try turnin -ls destination to check what you turned in.

Some Review

Helpful definitions.

$\mathbb{Z}$: Represents the set of all integers. {..., -1, 0, 1, 2, …}

$\mathbb{N}$: Represents the natural numbers. {1, 2, 3, …}

$\mathbb{R}$: Represents the real numbers.

$\forall$: Universal Quantifier “for all”

$\exists$: Existential Quantifier “there exists”

Question 1

Determine the truth value of the following statements if the domain of each variable consists of all integers $\mathbb{Z}$. Then repeat the exercise except the domain of each variable consists of all real numbers $\mathbb{R}$.

(a) $\forall x \exists y (x + y = 1)$

(b) $\forall x \exists y (x + y = 0)$

(c) $\exists x \forall y (x + y = 0)$

(d) $\forall z \exists x \exists y (x^2 + y^2 = z^2)$

Question 2

Use induction to show that $2^n < n!$ For $n \geq 4$.