

How to start, finish, edit and submit your work

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1 Login

1. Open a terminal window and use your username and password to login to MATH Dept servers:

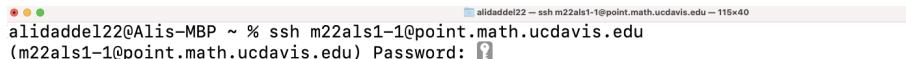
I am using the username m22als1-1 Since I am using MAC terminal I type

ssh m22als1-1@point.math.ucdavis.edu

and Press return.

When I type the password, the cursor doesn't move, it seems it is not working, BUT that is how it is designed.

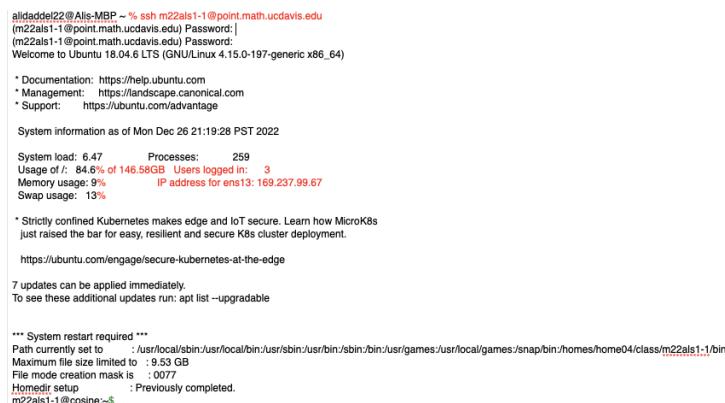
The system is case sensitive, Please type your password with extra care, I had to type it twice to make it right.



aliddadel22@Alis-MBP ~ % ssh m22als1-1@point.math.ucdavis.edu
(m22als1-1@point.math.ucdavis.edu) Password:

When you are logged on, you will see your username @ one of the servers, in my case it was
m22als1-1@cosine:~ \$

This means I am logged on to server called "Cosine".



```
aliddadel22@Alis-MBP ~ % ssh m22als1-1@point.math.ucdavis.edu
(m22als1-1@point.math.ucdavis.edu) Password: 
Welcome to Ubuntu 18.04.6 LTS (GNU/Linux 4.15.0-197-generic x86_64)

 * Documentation: https://help.ubuntu.com
 * Management: https://landscape.canonical.com
 * Support: https://ubuntu.com/advantage

System information as of Mon Dec 26 21:19:28 PST 2022

System load: 6.47      Processes: 259
Usage of /: 84.6% of 146.56GB  Users logged in: 3
Memory usage: 9%          IP address for ens13: 169.237.99.67
Swap usage: 13%         

* Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
just raised the bar for easy, resilient and secure K8s cluster deployment.

https://ubuntu.com/engage/secure-kubernetes-at-the-edge

7 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

*** System restart required ***
Path currently set to : /usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/bin:/usr/games:/usr/local/games:/snap/bin:/homes/home04/class/m22als1-1/bin
Maximum file size limited to : 9.53 GB
File mode creation mask is : 0077
Homedir setup : Previously completed.
m22als1-1@cosine:~$
```

2 Login

1. Open a terminal window and use your username and password to log in to the MATH Department servers. For example, I am using the username `m22als1-1`. Since I am using the macOS Terminal, I type:

```
ssh m22als1-1@point.math.ucdavis.edu
```

and then press `Return`.

When I type the password, the cursor does not move. It may seem as if nothing is happening, but this is normal behavior in UNIX systems. **Important:** The system is case sensitive. Please type your password carefully. In my case, I had to try twice before it was accepted.

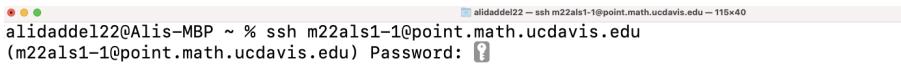


Figure 1: Login screen on the MATH Department server

When you are logged on, you will see your username followed by one of the servers. For example, in my case it was:

```
m22als1-1@cosine:~$
```

This means I am logged on to a server called **Cosine**.

```
aliddadel22@Alis-MBP ~ % ssh m22als1-1@point.math.ucdavis.edu
(m22als1-1@point.math.ucdavis.edu) Password: |
(m22als1-1@point.math.ucdavis.edu) Password: |
Welcome to Ubuntu 18.04.6 LTS (GNU/Linux 4.15.0-197-generic x86_64)

 * Documentation: https://help.ubuntu.com
 * Management: https://landscape.canonical.com
 * Support: https://ubuntu.com/advantage

System information as of Mon Dec 26 21:19:28 PST 2022

System load: 6.47      Processes:      259
Usage of /: 84.6% of 146.58GB  Users logged in:  3
Memory usage: 9%          IP address for ens13: 169.237.99.67
Swap usage: 13%          IP address for ens13: 169.237.99.67

* Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
just raised the bar for easy, resilient and secure K8s cluster deployment.
https://ubuntu.com/engage/secure-kubernetes-at-the-edge

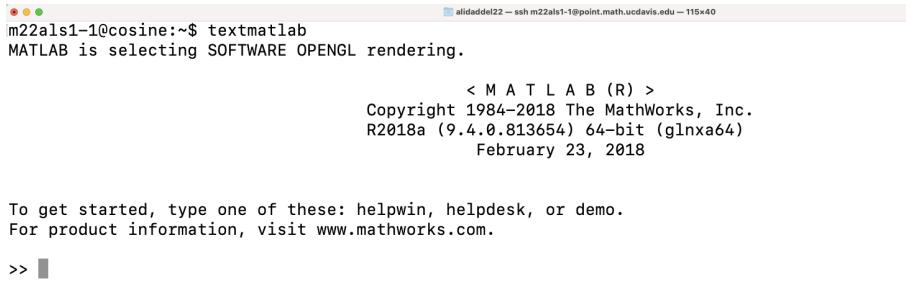
7 updates can be applied immediately
To see these additional updates run: apt list --upgradable

*** System restart required ***
Path currently set to : /usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/usr/games:/usr/local/games:/snap/bin:/homes/home04/class/m22als1-1/bin
Maximum file size limited to : 9.53 GB
File mode creation mask is : 0077
Home dir setup : Previously completed.
m22als1-1@cosine:~$
```

Figure 2: Successful login showing the server name

3 Starting MATLAB

Type `textmatlab` on the command line to start a MATLAB session. It may take 10–15 seconds for MATLAB to start.



```
m22als1-1@cosine:~$ textmatlab
MATLAB is selecting SOFTWARE OPENGL rendering.

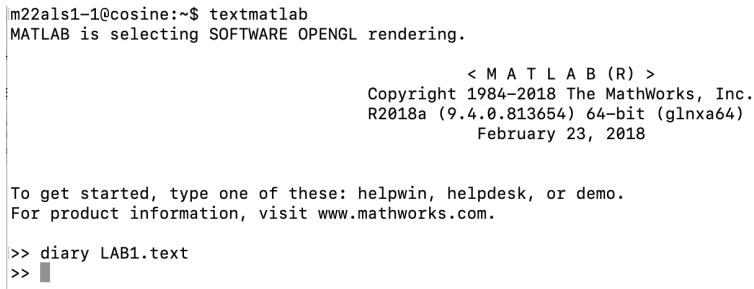
< M A T L A B (R) >
Copyright 1984-2018 The MathWorks, Inc.
R2018a (9.4.0.813654) 64-bit (glnxa64)
February 23, 2018

To get started, type one of these: helpwin, helpdesk, or demo.
For product information, visit www.mathworks.com.

>> █
```

Figure 3: Starting MATLAB from the command line

When you see the MATLAB prompt `>>`, your MATLAB session has started.



```
m22als1-1@cosine:~$ textmatlab
MATLAB is selecting SOFTWARE OPENGL rendering.

< M A T L A B (R) >
Copyright 1984-2018 The MathWorks, Inc.
R2018a (9.4.0.813654) 64-bit (glnxa64)
February 23, 2018

To get started, type one of these: helpwin, helpdesk, or demo.
For product information, visit www.mathworks.com.

>> diary LAB1.text
>> █
```

Figure 4: MATLAB prompt showing successful startup

Continue your work by visiting the course website:

https://www.math.ucdavis.edu/~daddel/MATH22AL/22AL_Home.html

Click on **LAB1** to see the instructions and information. Please follow them carefully until you finish your work.

Here are some example pictures of LAB1 from the website.

The rest of this handout presents a few important steps: starting a LAB, editing, viewing, and submitting your work.

Computer Lab for Linear Algebra : MAT 22AL

<p>General Information</p> <p>Basics</p> <p>Due Dates</p> <p>LAB1</p> <p>LAB2</p> <p>LAB3</p> <p>LAB4</p> <p>LAB5</p> <p>LAB6</p> <p>LAB7</p> <p>LAB8</p> <p>LAB9</p> <p>LAB10 (Extra Credit)</p> <p>New Website Under Construction</p> <p>Late Enrollment</p> <p>Unix Tutorial</p> <p>HOW to access Graded Assign?</p> <p>"POSTED GRADES"</p> <p>Copyright ©</p>	<p style="text-align: right;">1</p> <p>MATH 22AL Lab # 1</p> <p>Introduction:</p> <p>1 It is assumed that</p> <ol style="list-style-type: none"> 1. You already have your user name and password 2. You know how to login to the Department of Mathematics computers (point, round or line) in a terminal window in room 2118, or using your own computer and 3. You know how to start MATLAB . <p>If you need help on login please click here Login.</p> <p>This introductory lab is a brief MATLAB Tutorial. Please follow directions and type the given commands and press enter or return. You may find some info at A few NOTES on MATLAB please visit it by clicking on it.</p> <p>TO START: Open a terminal window and Login to one of Math Department computers (tangent or point, round), and follow the instruction below.</p> <p>2 Objectives</p> <p>In this LAB you will explore the following topics using MATLAB.</p> <ul style="list-style-type: none"> • Basic MATLAB command • Access or redefine any sub-matrix of a given matrix • Constructing large matrices using small matrices. • Creating vectors with equispaced elements
--	---

Figure 5: Opening LAB1 from the course website

4 Starting MATLAB

Type "textmatlab" on the command line to start a MATLAB session, it may take 10-15 seconds for MATLAB to start.

```

m22als1-10cosine:~$ textmatlab
MATLAB is selecting SOFTWARE OPENGL rendering.

< M A T L A B (R) >
Copyright 1984-2018 The MathWorks, Inc.
R2018a (9.4.0.813654) 64-bit (glnxa64)
February 23, 2018

To get started, type one of these: helpwin, helpdesk, or demo.
For product information, visit www.mathworks.com.
>> 
```

When you see the MATLAB prompt as ">>" , your MATLAB session started.
Continue your work by Visiting the course website at

https://www.math.ucdavis.edu/~daddel/MATH22AL/22AL_Home.html

and click on LAB1, you will see the instruction and information Please follow the instruction until you finish your work.

here are pictures of LAB 1 on the website.

The rest of this handout presenting few needed steps from starting a LAB, editing, viewing and submitting your LAB.

```
m22als1-1@cosine:~$ textmatlab
MATLAB is selecting SOFTWARE OPENGL rendering.

          < M A T L A B (R) >
Copyright 1984-2018 The MathWorks, Inc.
R2018a (9.4.0.813654) 64-bit (glnxa64)
February 23, 2018

To get started, type one of these: helpwin, helpdesk, or demo.
For product information, visit www.mathworks.com.

>> diary LAB1.text
>> █
```

Computer Lab for Linear Algebra : MAT 22AL

General Information

Basics

Due Dates

[LAB1](#)

[LAB2](#)

[LAB3](#)

[LAB4](#)

[LAB5](#)

[LAB6](#)

[LAB7](#)

[LAB8](#)

[LAB9](#)

LAB10 (Extra Credit)

New Website Under Construction

Late Enrollment

Unix Tutorial

HOW to access Graded Assign?

["POSTED GRADES "](#)

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MATH 22AL Lab # 1

Introduction:

1 It is assumed that

1. You already have your user name and password
2. You know how to login to the Department of Mathematics computers (point, round or line) in a terminal window in room 2118, or using your own computer and
3. You know how to start MATLAB .

If you need help on login please click here [Login](#).

This introductory lab is a brief MATLAB Tutorial. Please follow directions and type the given commands and press enter or return. You may find some info at [A few NOTES on MATLAB](#) please visit it by clicking on it.

TO START: Open a terminal window and **Login to one of Math Department computers (tangent or point, round)**, and follow the instruction below.

2 Objectives

In this LAB you will explore the following topics using MATLAB.

- Basic MATLAB command
- Access or redefine any sub-matrix of a given matrix
- Constructing large matrices using small matrices.
- Creating vectors with equispaced elements

Scroll down to see how to start the LAB:

3

General Information

Basics

Due Dates

LAB1

LAB2

LAB3

LAB4

LAB5

LAB6

LAB7

LAB8

LAB9

LAB10 (Extra Credit)

New Website Under Construction

[Late Enrollment](#)

[Unix Tutorial](#)

[HOW to access Graded Assign?](#)

["POSTED GRADES "](#)

Copyright ©

Entering your information

4

```
type % First Name: Example: % Jennifer
type % Last Name: Example: % Brown
type % Date: Example: % 12/24/2022.
type % Username: m22als4-25.
```

Ways to enter a vector in MATLAB: Direct; Using Command

You must press enter or return each time after typing the command

5

```
type u = [4 1.5 3.9] to create a 3-element row vector 3-element .
type v = [1 2 3.1 5]' to creates a 4-element column vector.
Prime will create the transpose.
```

In entering a large vector that does not fit in one line, before going to the next line type 3 dots like ... then, continue entering the rest of the vector in the next line.

```
type v1 = [1; 2; 3.1; 5] to create the same column vector using semicolons.
type w = [2 2.6 5 1 ... Make sure to press enter.
          Matlab will wait for your to enter the rest of the vector
type 11.6 9 -8] this is the rest of the vector.
type t = [u v'] Using brackets to combine two vectors.
```

Noticed that we used v', because v is a column vector, where u is a row vector.

```
type s=[ u' v ] this will produce an error.
          because the size of the vectors does not match.
```

5 Starting LAB 1

diary LAB1.text

First of all you need to type `diary LAB1.text`
by typing this you are asking MATLAB to open a file on the background call it `LAB1.text` and copy everything you type on it Until you type "diary off"

A Few things worth paying attention:

1. The name of the file must be exactly `LAB1.text` otherwise it will not be graded.
2. You can not see the file now, but later on you can view it by pico or an other editor.
3. If you forget to type `diary LAB1.text` nothing will be saved, you must redo the work.
4. If you have an unstable Internet, it is good idea to save `LAB1.text` and reopen it every 15 minutes or so, by typing
save
`diary off`
`diary LAB1.text`
load

As you see in the following picture, I entered my information and followed the instructions. After typing "v1" I decided to stop, save my work and do it later.

Causion

Please note that you need to finish the LAB before exiting MATLAB. I am exiting here just to show you how it can be done.

I typed:

save
`diary off`
exit

6 Exiting LAB1.text

save: stores all variables (matrices) in a binary format in a file called `matlab.mat`
this for my future use, when I want to continue the work. It only saves active variables in the session and overwrites the previous file.

diary off: Stops writing on the file "LAB1.text" and saves the file and close the file.

exit: exit MATLAB

```

' ● ● ●
          aliddadel22 -- ssh m22als1-1@point.math.ucdavis.edu -- 122x45

>> diary LAB1.text
>> % Ali
>> % Daddel
>> % 12/27/2040
>> % m22als1-1
>> u= [ 4 1.5 3.9]

u =
4.0000 1.5000 3.9000

>> v=[ [1 2 3.1 5]'

v= [1 2 3.1 5]
v= [1 2 3.1 5]
|
Error: Incorrect use of '=' operator. To assign a value to a variable, use '='. To compare values for equality, use '=='.

>> v=[1 2 3.1 5]

v =
1.0000
2.0000
3.1000
5.0000

>> v1= [1; 2; 3.1; 5]
v1 =
1.0000
2.0000
3.1000
5.0000

>> save
Saving to: /homes/home04/class/m22als1-1/matlab.mat

>> diary off
>> exit
m22als1-1@cosine:~$ '

```

7 Continuing Your LAB

Now To continue and finish LAB1, after opening a terminal window and logging to a Math Department server, I typed **textmatlab** then typed
 diary LAB1.text

Note

diary LAB1.text

This time MATLAB opens the existing file and appends (adds) whatever I type to the end of the file LAB1.text.

The name of the file must be exactly LAB1.text otherwise your work will be stored in two different files and your lab will not pass.

who

MATLAB does not recall any of the variables, then I typed

load

then, I typed

who

as you see MATLAB shows me the variables. I continue LAB1 and the assumed lab is done after typing the matrix "A". So I typed the three commands

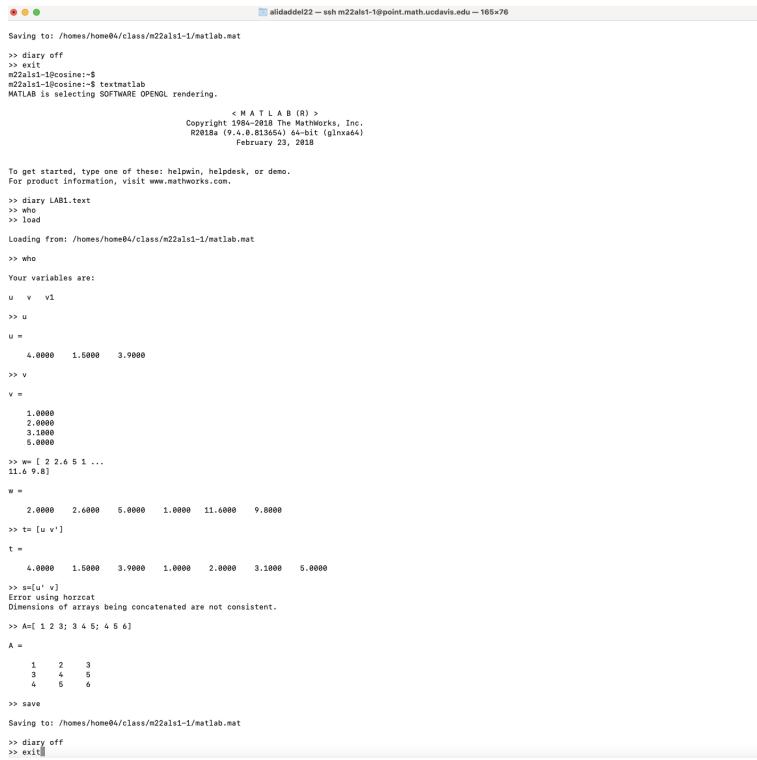
diary LAB1.text

Ending LAB commands

save

diary off

exit



```

aliddadel22 -- ssh m22als1-1@point.math.ucdavis.edu - 165x76

Saving to: /homes/home04/class/m22als1-1/matlab.mat
>> diary off
>> who
m22als1-1@cosine:~$ 
m22als1-1@cosine:~$ ttermmatlab
MATLAB is selecting SOFTWARE OpenGL rendering.

MATLAB Version 9.4.0.813646 (R2018a) 64-bit (glnxa64)
Copyright 2018 The MathWorks, Inc.

To get started, type one of these: helpwin, helpdesk, or demo.
For product information, visit www.mathworks.com.
>> diary LAB1.txt
>> who
>> load
Loading from: /homes/home04/class/m22als1-1/matlab.mat
>> who
Your variables are:
u v v1
>> u
u =
4.0000 1.5000 3.9000
>> v
v =
1.0000
2.0000
3.1000
5.0000
>> w=[ 2 2.6 5 1 ...
11.5 9.8]
w =
2.0000 2.6000 5.0000 1.0000 11.6000 9.8000
>> t=[u v']
t =
4.0000 1.5000 3.9000 1.0000 2.0000 3.1000 5.0000
>> s=[u v]
Error using horzcat
Dimensions of arrays being concatenated are not consistent.
>> A=[ 1 2 3; 3 4 5; 4 5 6]
A =
1 2 3
3 4 5
4 5 6
>> save
Saving to: /homes/home04/class/m22als1-1/matlab.mat
>> diary off
>> exit();

```

8 Editing Your LAB

Editing LAB1.text

During working on LAB1, I made few mistakes, I use an editor called **pico** to view and edit (delete the errors and insert missing texts) the content of the file LAB1.text.

9 Pico Commands

Pico Commands

Pico a user friendly editor. The last two line of the window shows some of the useful commands. for example: **Ctrl-o** means hold the control key and press x

Ctrl-o	write out (save)	Ctrl-k	Delete the line the cursor is on
Ctrl-x	exit Pico	Ctrl-u	Restore the last line that was deleted
Ctrl-d	Delete the character the cursor is on	Ctrl-e	Delete to end of current line
Ctrl-a	Beginning of current line	Ctrl-e	End of current line
Ctrl-v	Forward one screen.	Ctrl-y	Backward one screen

Saving a File: To save the file (LAB1.text), use the **Ctrl-o** (write out) command. It will ask you the file name to use, you can return to confirm the current name. If you exit Pico before saving the changes by using the **Ctrl-x** (exit) command, you will be given a chance to decide about the file name.

10 Viewing LAB1.text

When I stopped and restart doing LAB1, i had to type several commands that are not needed to be in my submission. I highlighted those lines and will use **Ctrl-k** to delete those lines.

```
GNU nano 2.9.3
GNU nano 2.9.3
alidaddel22 — ssh m22als1-1@point.math.ucdavis.edu — 165x76
LAB1.txt

# Ali
% Dadel
% 12/27/2040
% m22als1-1
u= [ 4 1.5 3.9]

u =
4.0000 1.5000 3.9000

v=[ 1 2 3.1 5]

v= [ 1 2 3.1 5]
v= [ 1 2 3.1 5]
|
(*Error: Incorrect use of '=' operator. To assign a value to a variable, use '='. To compare values for equality,
use '=='.
) *H
v= [ 1 2 3.1 5]

v =
1.0000
2.0000
3.1000
5.0000

v1= [ 1; 2; 3.1; 5]

v1 =
1.0000
2.0000
3.1000
5.0000

save

Saving to: /homes/home04/class/m22als1-1/matlab.mat

diary off
who
load

Loading from: /homes/home04/class/m22als1-1/matlab.mat

who

Your variables are:

u v v1

u

u =
4.0000 1.5000 3.9000

v

v =
1.0000
2.0000
3.1000
5.0000

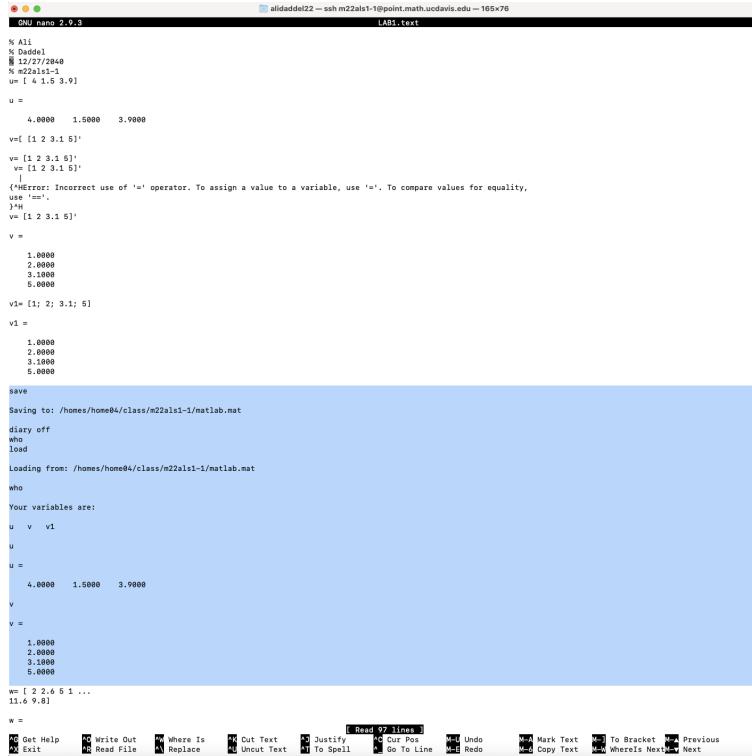
w= [ 2 2.6 5 1 ...
11.6 9.8]

w =
[ 2 2.6 5 1 ...
11.6 9.8]

[ Read 97 lines ]
AC Get Help  ^D Write Out  ^W Where Is  ^X Cut Text  ^J Justify  ^C Cur Pos  ^U Undo  ^M Mark Text  ^G To Bracket  ^P Previous
^X Exit  ^R Read File  ^A Replace  ^U Uncut Text  ^T To Spell  ^I Go To Line  ^E Redo  ^W Copy Text  ^N Where Is Next  ^L Next
```

11 Deleting Errors

Also there were few errors on my typing, that I will delete them using **Ctrl-k**. they are highlighted in the picture below:



```
GNU nano 2.9.3                               LAB1.tex
%
% A1
% 1.1.1.1
% 12/27/2048
% m22als1-1
% u = 4 1.5 3.9
u =
4.0000 1.5000 3.9000
v=[ 1 2 3.1 5]
v=[ 1 2 3.1 5]
v=[ 1 2 3.1 5]
|(*Error: Incorrect use of '=' operator. To assign a value to a variable, use '='. To compare values for equality,
use '=='.
)]=
v=[ 1 2 3.1 5]
v =
1.0000
2.0000
3.0000
5.0000
v1=[ 1; 2; 3.1; 5]
v1 =
1.0000
2.0000
3.0000
5.0000
save
Saving to: /homes/home84/class/m22als1-1/matlab.mat
diary off
who
load
Loading from: /homes/home84/class/m22als1-1/matlab.mat
who
Your variables are:
u v v1
u
u =
4.0000 1.5000 3.9000
v
v =
1.0000
2.0000
3.0000
5.0000
w=[ 2 2.6 6 1 ...
11.9 9.8]
w =
Get Help  Write Out  Where Is  Cut Text  Justify  Read 97 lines
Exit  Read File  Replace  Uncut Text  To Spell  Cur Pos  Undo  Mark Text  To Bracket  Previous
  Write In  Replace  Cut  Justify  Cur Pos  Go To Line  Redo  Copy Text  To Where Is Next
  Read File  Replace  Cut  Justify  Cur Pos  Go To Line  Undo  Mark Text  To Bracket  Next
  Read File  Replace  Cut  Justify  Cur Pos  Go To Line  Redo  Copy Text  To Where Is Next
```

A few more errors needs to be deleted:

```

  ● ○ ●
  aliddadel22 -- ssh m22als1-1@point.math.ucdavis.edu - 165x76
  GNU nano 2.9.3
  LAB1.text

% Ali
% Daddel
% 12/27/2048
% m22als1-1
u= [ 4 1.5 3.9]

u =
4.0000 1.5000 3.9000

v=[ [1 2 3.1 5]
  [1 2 3.1 5]
  (^Error: Incorrect use of '=' operator. To assign a value to a variable, use '='. To compare values for equality,
  use '=='.
  )]
v=[1 2 3.1 5]

v =
1.0000
2.0000
3.1000
5.0000

v1= [1; 2; 3.1; 5]
v1 =
1.0000
2.0000
3.1000
5.0000

save
Saving to: /homes/home04/class/m22als1-1/matlab.mat

diary off
who
load

Loading from: /homes/home04/class/m22als1-1/matlab.mat

who

Your variables are:

u v v1

u

u =
4.0000 1.5000 3.9000

v

v =
1.0000
2.0000
3.1000
5.0000

w= [ 2 2.6 5 1 ...
11.6 9.8]
w =
2.0000 2.6000 5.0000 1.0000 11.6000 9.8000

  █ Get Help   █ Write Out   █ Where Is   █ Cut Text   █ Justify   █ Cur Pos   █ Undo   █ Mark Text   █ To Bracket   █ Previous
  █ Exit      █ Read File   █ Replace    █ Uncut Text  █ To Spell   █ Go To Line  █ Redo   █ Copy Text   █ WhereIs Next   █ Next

```

```

  ● ○ ●
  aliddadel22 -- ssh m22als1-1@point.math.ucdavis.edu - 165x76
  GNU nano 2.9.3
  LAB1.text

w =
2.0000 2.6000 5.0000 1.0000 11.6000 9.8000

t= [u v]
t =
4.0000 1.5000 3.9000 1.0000 2.0000 3.1000 5.0000

s=[u' v']
(^Error using horzcat
Dimensions of arrays being concatenated are not consistent.
)'

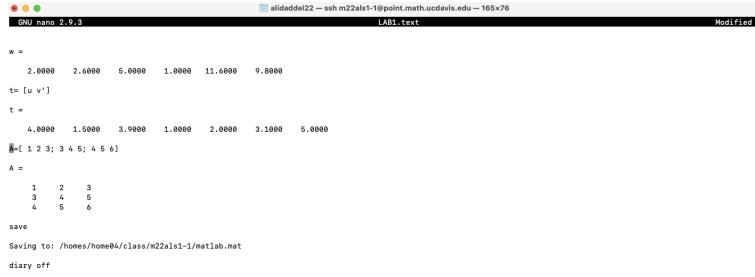
A=[ 1 2 3; 3 4 5; 4 5 6]

A =
1 2 3
3 4 5
4 5 6

save
Saving to: /homes/home04/class/m22als1-1/matlab.mat
diary off

```

Here is the picture after deleting:



```
aliddadel22 - ssh m22als1-1@point.math.ucdavis.edu - 165x76
GNU nano 2.9.3                                         LAB1.text                                         Modified

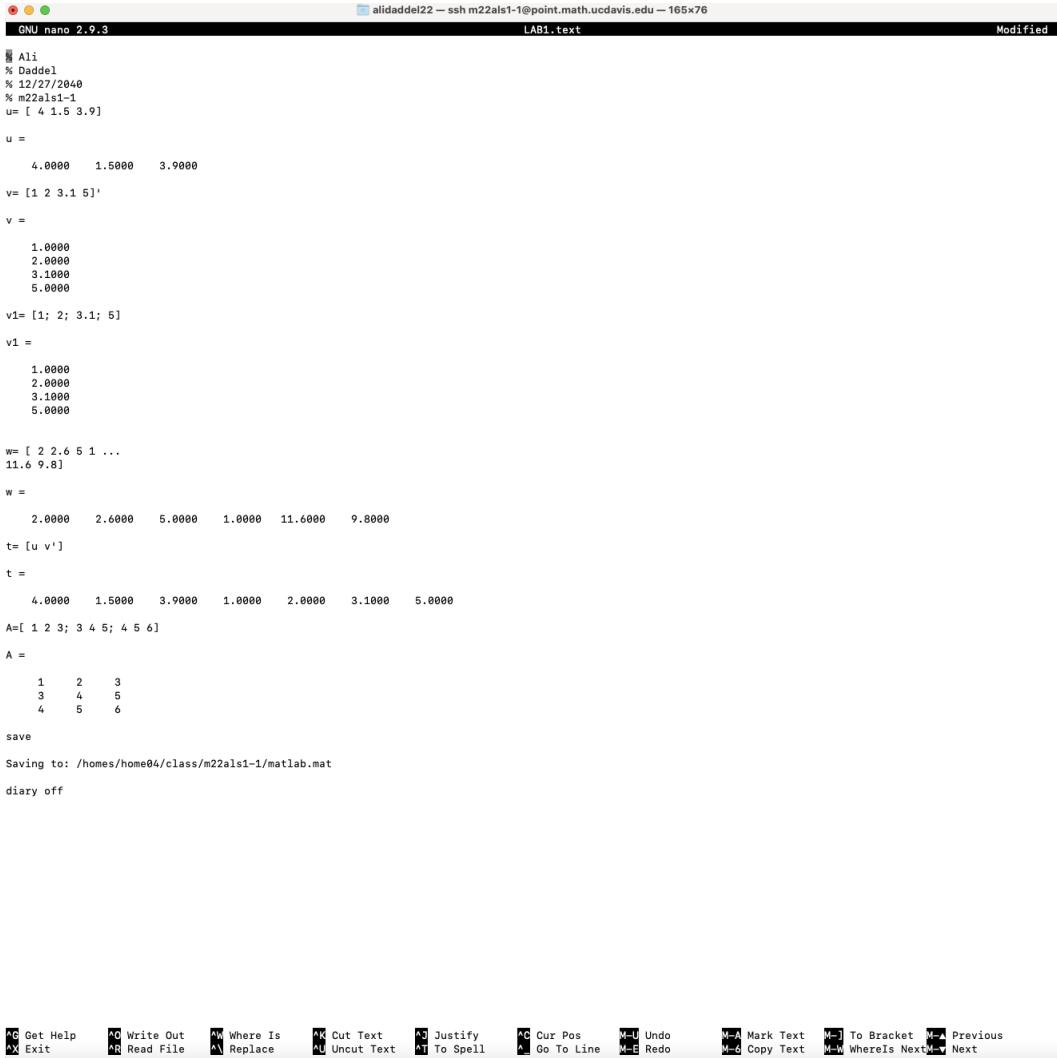
w =
2.0000 2.6000 5.0000 1.0000 11.6000 9.8000
t= [u v']

t =
4.0000 1.5000 3.9000 1.0000 2.0000 3.1000 5.0000
%=[ 1 2 3; 3 4 5; 4 5 6]

A =
1 2 3
3 4 5
4 5 6

save
Saving to: /homes/home04/class/m22als1-1/matlab.mat
diary off
```

Here is a picture of the clean LAB1.text file. This is not the entire lab, I just did the part of it to show how it works.



```
aliddadel22 - ssh m22als1-1@point.math.ucdavis.edu - 165x76
GNU nano 2.9.3                                         LAB1.text                                         Modified

% Ali
% Daddel
% 12/27/2040
% m22als1-1
u= [ 4 1.5 3.9]

u =
4.0000 1.5000 3.9000
v= [1 2 3.1 5]

v =
1.0000
2.0000
3.1000
5.0000
v1=[1; 2; 3.1; 5]
v1 =
1.0000
2.0000
3.1000
5.0000

w= [ 2 2.6 5 1 ...
11.6 9.8]

w =
2.0000 2.6000 5.0000 1.0000 11.6000 9.8000
t= [u v']

t =
4.0000 1.5000 3.9000 1.0000 2.0000 3.1000 5.0000
A=[ 1 2 3; 3 4 5; 4 5 6]

A =
1 2 3
3 4 5
4 5 6

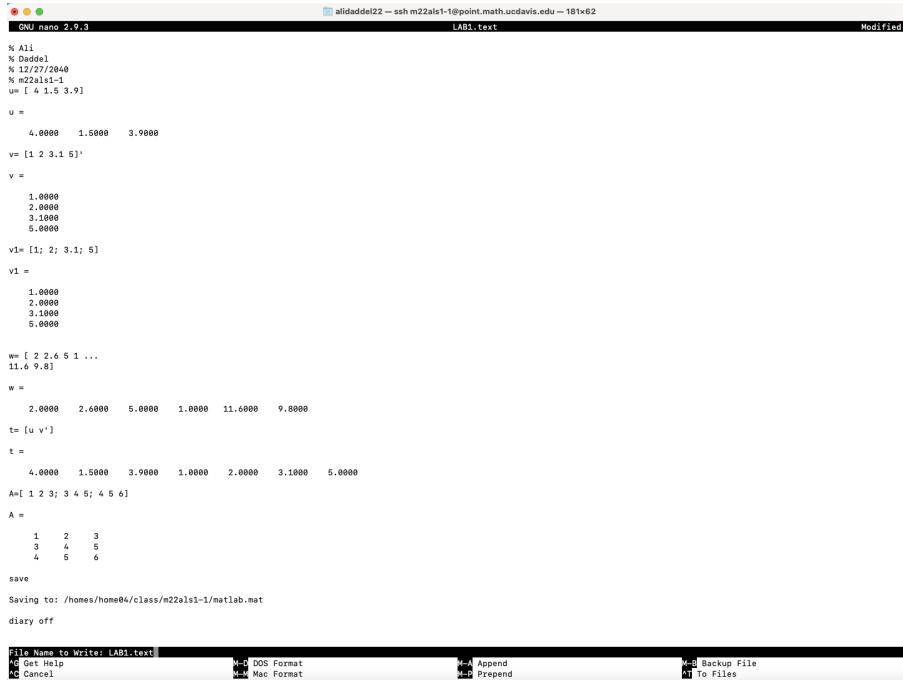
save
Saving to: /homes/home04/class/m22als1-1/matlab.mat
diary off
```

12 Saving Changes

I used **Ctrl-O** to save changes. Pico asking me if I want to save on the same file?

Filename to Write: LAB1.text

Press **return** to confirm the file name.

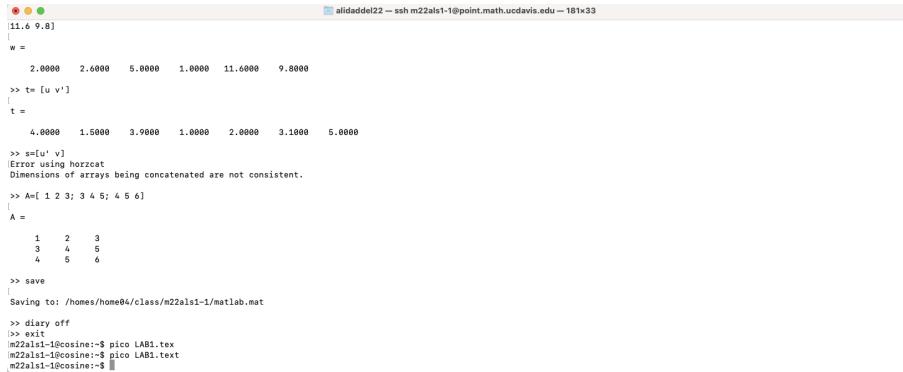


The screenshot shows a terminal window titled "GNU nano 2.9.3" with the file "LAB1.text" open. The content of the file is a MATLAB script. The script defines variables u, v, v1, w, and t, and performs operations like matrix multiplication and saving to a MATLAB file. At the bottom of the file, there is a "File Name to Write" dialog box with the text "LAB1.text" and several options: "Get Help", "DOS Format", "Mac Format", "Append", "Prepend", "Backup File", and "To Files".

```
% All
% Date:1
% 3/27/2040
% m22als1-1
% m22als1-1
u= [ 4 1.5 3,9]
u =
4.0000 1.5000 3.9000
v= [1 2 3,1 5]*
v =
1.0000
2.0000
3.0000
5.0000
v1= [1; 2; 3,1; 5]
v1 =
1.0000
2.0000
3.0000
5.0000
w= [ 2 2.6 5 1 ...
11.6 9.8]
w =
2.0000 2.6000 5.0000 1.0000 11.6000 9.8000
t= [u v*]
t =
4.0000 1.5000 3.9000 1.0000 2.0000 3.1000 5.0000
A=[ 1 2 3; 3 4 5; 4 5 6]
A =
1 2 3
3 4 5
4 5 6
save
Saving to: /homes/home04/class/m22als1-1/matlab.mat
diary off
```

File Name to Write: LAB1.text
Get Help DOS Format Append Backup File
Cancel Mac Format Prepend To Files

Then I used **Ctrl-X** to exit pico and get back to computer command line. I typed ssh point to connect to a math Department server, this is needed when you work at terminals in room 1118, if you are using your own computer, you don't need this.



The screenshot shows a terminal window with the command line "aliddadel22 -- ssh m22als1-1@point.math.ucdavis.edu -- 181x33". The user is in a MATLAB session, performing the same operations as in the previous screenshot. The command "ss" is used to save the file, and the user receives an error message: "Error using horzcat Dimensions of arrays being concatenated are not consistent." The session ends with the command "diary off".

```
11.6 9.8]
w =
2.0000 2.6000 5.0000 1.0000 11.6000 9.8000
>> t= [u v*]
t =
4.0000 1.5000 3.9000 1.0000 2.0000 3.1000 5.0000
>> ss[u' v']
Error using horzcat
Dimensions of arrays being concatenated are not consistent.
>> A=[ 1 2 3; 3 4 5; 4 5 6]
A =
1 2 3
3 4 5
4 5 6
>> save
Saving to: /homes/home04/class/m22als1-1/matlab.mat
>> diary off
>> m22als1-1@cosine:~$ pico LAB1.tex
m22als1-1@cosine:~$ pico LAB1.text
m22als1-1@cosine:~$
```

13 Submitting your LAB

To submit LAB1.text I typed :
submitm22al LAB1.text

```
● ● ● alidadel22 -- ssh m22als1-1@point.math.ucdavis.edu -- 181x33
RSA key fingerprint is SHA256:73y+sFGM0mVf8cSBg7UT/woX8GxTbh0859eV51+pQ.
No matching host key fingerprint found in DNS.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added 'point.math.ucdavis.edu,169.237.99.67' (RSA) to the list of known hosts.
Welcome to Ubuntu 18.04.6 LTS (GNU/Linux 4.15.0-197-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage
System information as of Mon Dec 26 21:47:49 PST 2022

System load:  5.48      Processes:          263
Usage of /:   84.6% of 146.59GB  Users logged in:   4
Memory usage: 9%          IP address for ens13: 169.237.99.67
Swap usage:   13%         

* Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
just raised the bar for easy, resilient and secure K8s cluster deployment.
https://ubuntu.com/engage/secure-kubernetes-at-the-edge

7 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

*** System restart required ***
Last login: Mon Dec 26 21:19:29 2022 from 104.183.6.36
Path is currently set to: /usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/bin:/usr/games:/usr/local/games:/snap/bin:/homes/home04/class/m22als1-1/bin
Maximum file size limited to : 9.53 GB
File mode creation mask is : 0877
Home dir setup : Previously completed.
m22als1-1@cosine:~$ submitm22al LAB1.text
```

14 Confirmation of submission

When LAB1 is sent, it will write on the screen:

m22als1-1 sending LAB1.text at Mon Dec 26 21:48:28 to ta22al@math.ucdavis.edu

This is your confirmation, please take a picture or screenshot and keep it until the end of the quarter.

```
aliddadel22 -- ssh m22als1-1@point.math.ucdavis.edu - 181x33
Warning: Permanently added 'point.math.ucdavis.edu,169.237.99.67' (RSA) to the list of known hosts.
Welcome to Ubuntu 18.04.6 LTS (GNU/Linux 4.15.0-197-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Mon Dec 26 21:47:49 PST 2022

System load: 5.68      Processes:          263
Usage of /: 84.4% of 146.58GB  Users logged in:   4
Memory usage:  9.53 GB          IP address for ens13: 169.237.99.67
Swap usage:  13%

* Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
just raised the bar for easy, resilient and secure K8s cluster deployment.

https://ubuntu.com/engage/secure-kubernetes-at-the-edge

7 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

*** System restart required ***
Last login: Mon Dec 26 21:19:29 2022 from 104.183.5.36
Path currently set to          : /usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/bin:/usr/games:/usr/local/games:/snap/bin:/homes/home04/class/m22als1-1/bin
Maximum file size limited to  : 9.53 GB
File mode creation mask is   : 0664
Home dir setup                : Previously completed.
m22als1-1@cosine:~$ submitm22al LAB1.text
m22als1-1 sending LAB1.text at Mon Dec 26 21:48:28 2022 to ta22al@math.ucdavis.edu
sent to ta22al@math.ucdavis.edu
m22als1-1@cosine:~$
```

15 Logging out

Now it is time to logout:

```
aliddadel22 -- ssh m22als1-1@point.math.ucdavis.edu - 181x33
Warning: Permanently added 'point.math.ucdavis.edu,169.237.99.67' (RSA) to the list of known hosts.
Welcome to Ubuntu 18.04.6 LTS (GNU/Linux 4.15.0-197-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Mon Dec 26 21:47:49 PST 2022

System load: 5.68      Processes:          263
Usage of /: 84.4% of 146.58GB  Users logged in:   4
Memory usage:  9.53 GB          IP address for ens13: 169.237.99.67
Swap usage:  13%

* Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
just raised the bar for easy, resilient and secure K8s cluster deployment.

https://ubuntu.com/engage/secure-kubernetes-at-the-edge

7 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

*** System restart required ***
Last login: Mon Dec 26 21:19:29 2022 from 104.183.5.36
Path currently set to          : /usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/bin:/usr/games:/usr/local/games:/snap/bin:/homes/home04/class/m22als1-1/bin
Maximum file size limited to  : 9.53 GB
File mode creation mask is   : 0664
Home dir setup                : Previously completed.
m22als1-1@cosine:~$ submitm22al LAB1.text
m22als1-1 sending LAB1.text at Mon Dec 26 21:48:28 2022 to ta22al@math.ucdavis.edu
sent to ta22al@math.ucdavis.edu
m22als1-1@cosine:~$ logout
```

```
m22als1-1@cosine:~$ logout
Connection to point.math.ucdavis.edu closed.
m22als1-1@cosine:~$ logout
Connection to point.math.ucdavis.edu closed.
aliddadel22@Alii-MBP: ~ %
```