Review for final
Thursday May 7, 10-noon
Covers all of semester

Office Hours noon-1pm
This Thursday
Next Monday
Lecture 1 – Neuron firing
Lecture 2 – Weight changes/weight patterns
Lecture 3 – Divisions in brain, organizing principles
Lecture 4 – Information encoding
Lecture 5 – Motion
Lecture 6 – Memory (binding, dynamics)
Lecture 7 – Perception (hear, see)
Matlab – multi-dim indices, loops, plots, functions
Holding information in the brain
Plain anatomy – 3 dimension
size(BrainAnatomy) <- [90, 90, 30]

BrainAnatomy(10,80,25 )
X = 10 – near-front of brain – ant to post
Y = 80 – near right side of brain – left to right
Z = 25 – near top of brain – vent to dors
How do I plot a slice from the plane shown above?

??? BrainAnatomy ???

```
imagesc(squeeze(BrainAnatomy(:,:,20)))
```

All indices in x and y directions
Selected location in z (up-down) direction
```
squeeze(mat)
    if size(mat) == [90,90,1]
        size(squeeze(mat)) = [90,90]
```
squeeze eliminates dimension with 1 entry

One slice:
```
imagesc(squeeze(BrainAnatomy(:,:,20)))
```
How can we change this code to a loop?

```matlab
for LoopInstruct, i=1:30,
    part1 subplot(5,6,i),
    part2 im..(squ..(Br))
    imagesc(squeeze(BrainAnatomy(:, :, i)));
end;
```
I want to make function `slicePlot` that takes in a 3-D brain matrix and does a plot of all it’s slices

Subplot with r rows, c cols,
BrainMat has r*c slices in z dimension

To use `slicePlot`, just type

```
slicePlot(BrainMat, r, c)
```
into matlab

```
slicePlot(BrainAnatomy, 5, 6)
```

```
function out = nameFunc (in)
commands-to-run
```
function slicePlot(BrainIn,r,c)
for i=1:30 r*c ,
    subplot(5 r,6 c ,i),
    imagesc(squeeze(BrainAnatomy(:,:,i)));
end;

for i=1:30,
    subplot(5,6,i),
    imagesc(squeeze(BrainAnatomy(:,:,i)));
end;