

Matlab day 5

More small problems

Practical

- Two parts
 - One financial the other physics
 - Must be done in Matlab
 - Will be posted by 6pm today.
 - Both were under 20 lines for me.

HW6

- Posted by 6pm.
 - Mostly Matlab
 - Some generic exam review

Announcements

- Final Exam Review is 7-9pm, April 19, in the large FXB lecture room.
- Friday
 - Matlab version of Project C (By Paul)
 - Class evaluations
- Monday
 - Exam review (30 minutes)
 - Class review (20 minutes)

Write (from last time)

- Write a function “OneM” which takes a vector of integers. It is to return the smallest integer X where $X \% A_n$ is equal to 1 for all values in the vector.
 - So OneM[2 3 4]=13
 - $13 \% 2$ equals 1
 - $13 \% 3$ equals 1
 - $13 \% 4$ equals 1
- In Matlab $13 \% 4$ is written as mod(13,4)

```
function r=tmp3(N) %N is scalar
count=1;
num=3;
array=[2]

while(count<N)
    if(min(mod(num, array)~=0))
        array=[array num];
        count=count+1;
    end
    num=num+1;
end
r=array;
```

Write

- Write a function which takes a 3 by 3 matrix representing a tic-tac-toe board and figures out who won (if anyone)
 - On the board:
 - 2=X
 - 1=O
 - 0=No one has gone there
 - Return a 2 if X wins, a 1 if O wins and a 0 if no one has one.
 - You may assume there is only one winner.
 - We have done this in class before. But don't look at the old notes.

Write

- Take a 10 by 10 matrix.
 - Set the upper right-hand corner to 2s.
 - Set the lower left-hand corner to 4s.
 - Set 2 by 2 square in the upper left-hand corner to 5s.
 - Set all edges not already set to be 6s.
 - Set the rest of the matrix to be 0's.
 - **Hint: Don't do things in this order!**

Write

- Write a function which takes two 1 by 2 vectors as arguments. Each vector is to be treated as a complex number where the first is the real component and the second is the imaginary component.
 - Your function (named “multi”) will return the product of those two imaginary number (as a 1 by 2 vector)
 - Recall that $(a, bi) * (c, di) = (a*c-b*d, a*d+b*c)$