Today

- ICA in Gradescope
- Practice with variables and if-statements

BEAR DOWN & VOTE | ASUA Today

How to vote on campus?

Midterm 2

Problem	Description	Estimated time	Max Points
1, 2	Multiple choice	4 mins	6
3	Find the final output	6 mins	15
4	Write short instructions	6 mins	9
5	Loop table	4 mins	10
6	Write Loop	2 mins	3
7	Write Processing Program	7 mins	25
8	Write Loop	2 mins	3
9	Simulate Code	7 mins	25
10	Write Loop	2 mins	4
	TOTAL	**40 mins**	**100**

Question 1

Write a program to find the maximum of three numbers.

SOLUTION FROM A STUDENT

```
//find the maximum of three numbers. -NOT OPTIMAL

int x = 9, y =-30, z= 9;

//if x and y are less than z, then z is the maximum number

if ( x<z && y < z  )

//if z and y are less than x, then x is the maximum number
//if x and z are less than y, then y is the maximum number
```

```
//find the maximum of three numbers.

int x = 9, y =-30, z= 9;
int max;
// find the max between the first two numbers (x and y)
//if x less than y, then max = y, else max = x

// find the max between “max” and the last number (z)
```

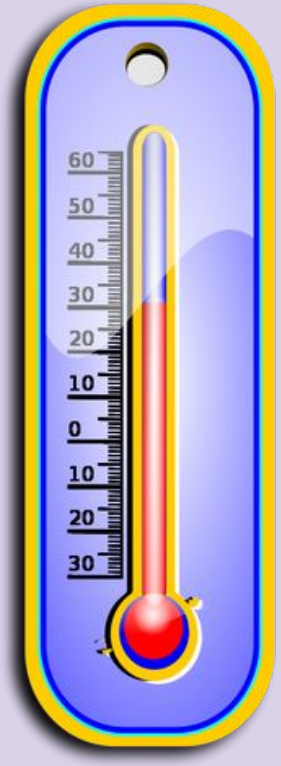
SOLUTION FROM A STUDENT

```
int x = 4, y = -30, z = 7;
int max = x;

if(x > y){
  max = x;
} else{
  max = y;
}
if(max < z){
  max = z;
}

print(max);
```

Please ask me questions

How are you feeling?

A. Very confused
B. Need a lot more practice
C. Need a little more practice
D. Just have a couple of questions
E. Feeling good



Question 2. Practice Basic Animations

Write a program that shows a red circle moving from the top left corner to the bottom right corner of the canvas.

SOLUTION FROM A STUDENT

```
void setup() {
  size(500, 500);
}

int move = 0;

void draw() {
  background(100, 100, 100);
  fill(255, 0, 0);
  circle(move, move, 50);
  move += 1;
}
```

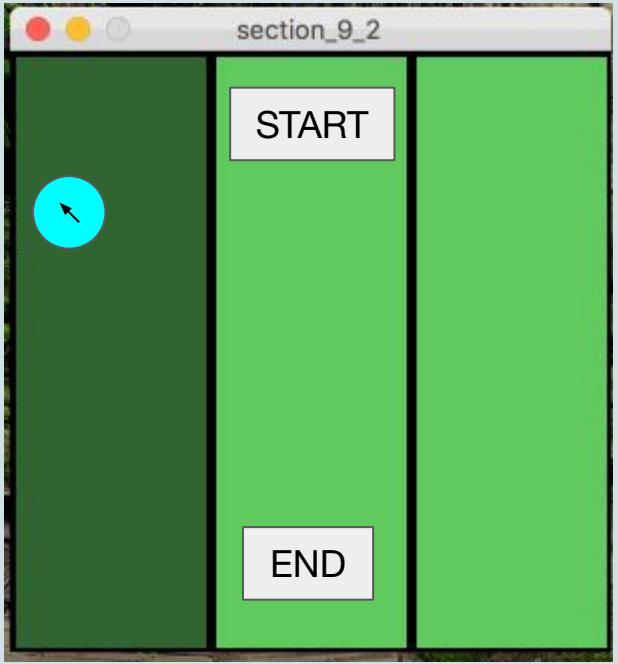
Text

- We want to draw characters on the canvas
- **`text() – a new function`**
- The function text(s,x,y) will draw the character specified in s at the coordinate given by the x and y arguments.

```
void setup() {
  size(300, 300);
  textSize(200);          // new!
}
void draw() {
  background(100, 100, 100);
  fill(255, 0, 0);
  text(“Hi!”, 100, 180);  //draw some words
}
```

Question 3

Add two text boxes and rectangles to the three_rectagles.pde (Oct 2nd) program so your canvas looks like this



SOLUTION FROM A STUDENT

```
fill(255,255,255);
rect(width/3+7,10,50,20);
rect(width/3+7,170,50,20);

fill(0,0,0);
text("Start",width/3+15,25);
text("End",width/3+15,185);
```

SOLUTION FROM A STUDENT

```
text("START",width*0.4,height*.1);
text("END",width*0.45,height*.875);
```