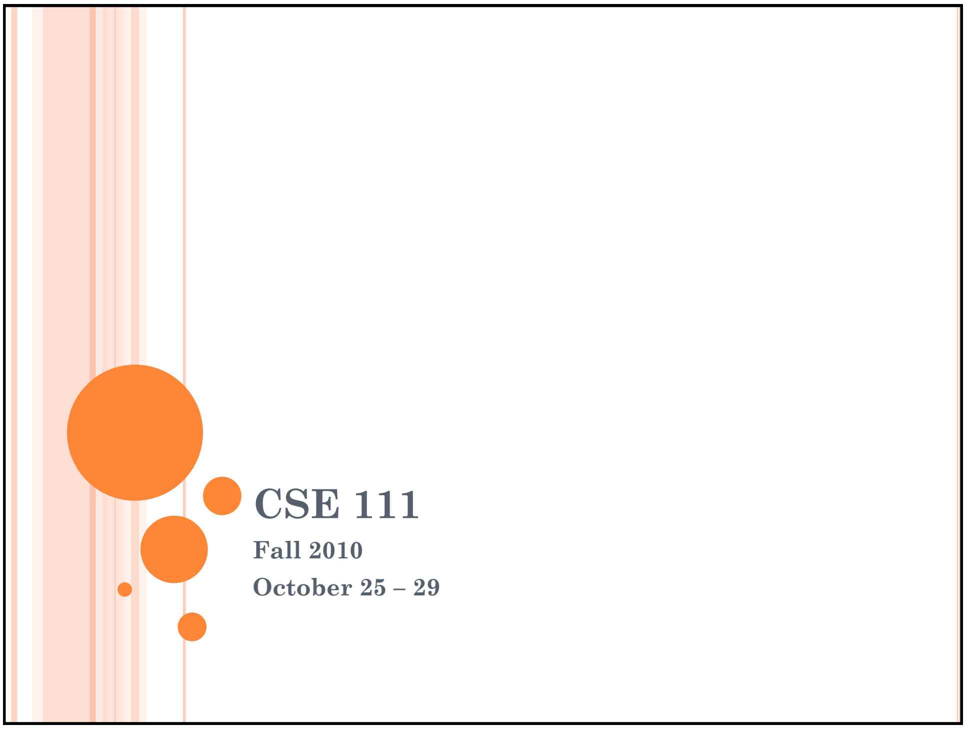
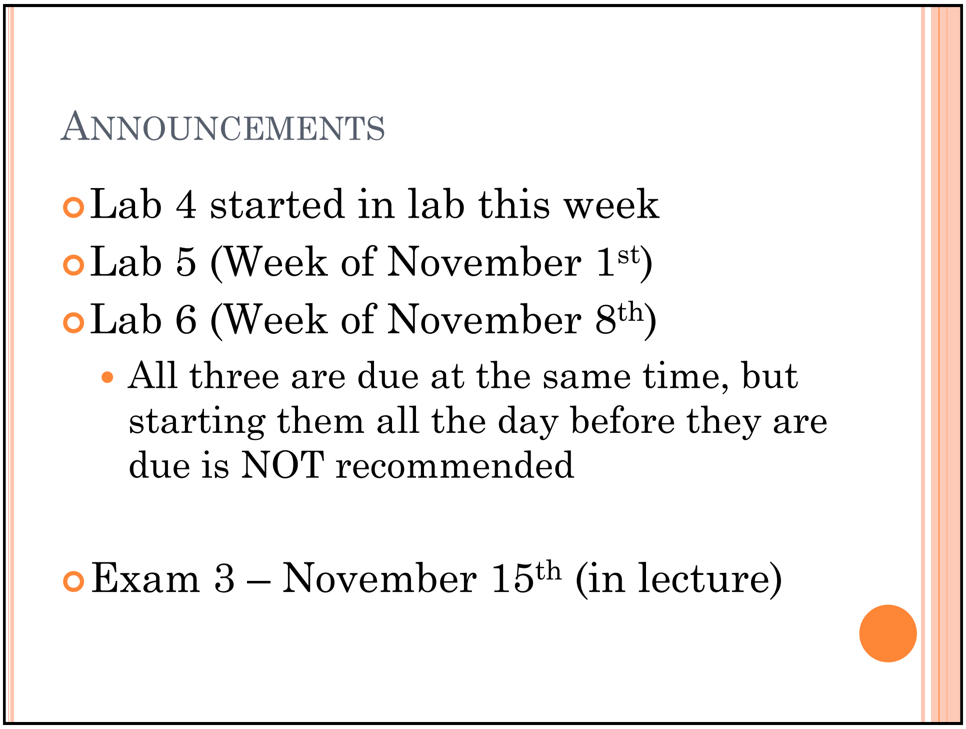


CSE 111

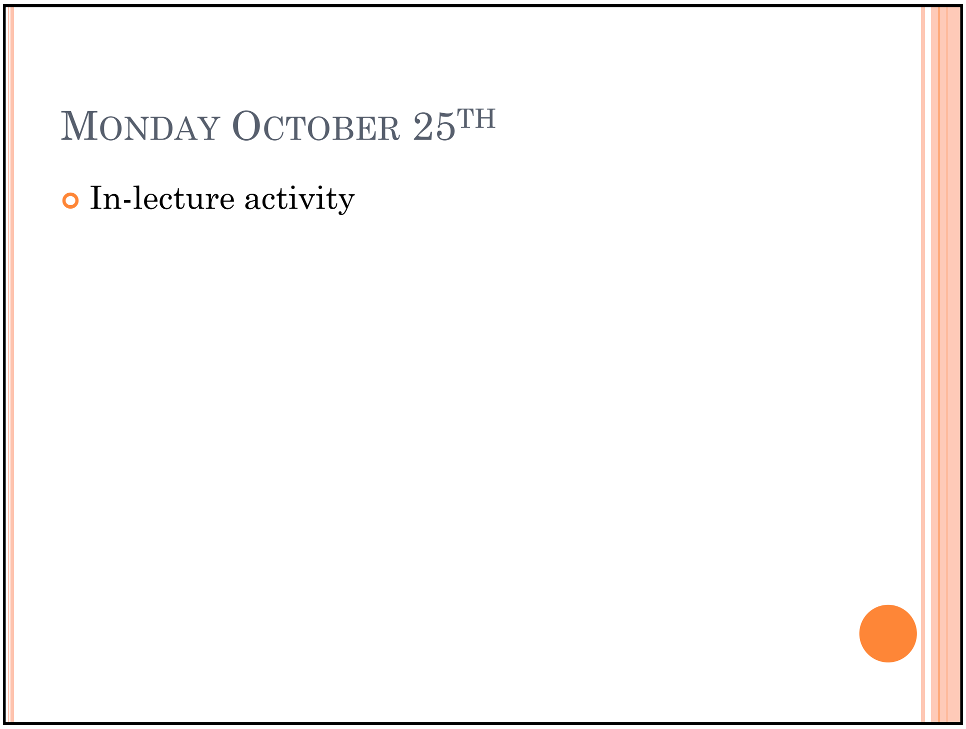
Fall 2010

October 25 – 29



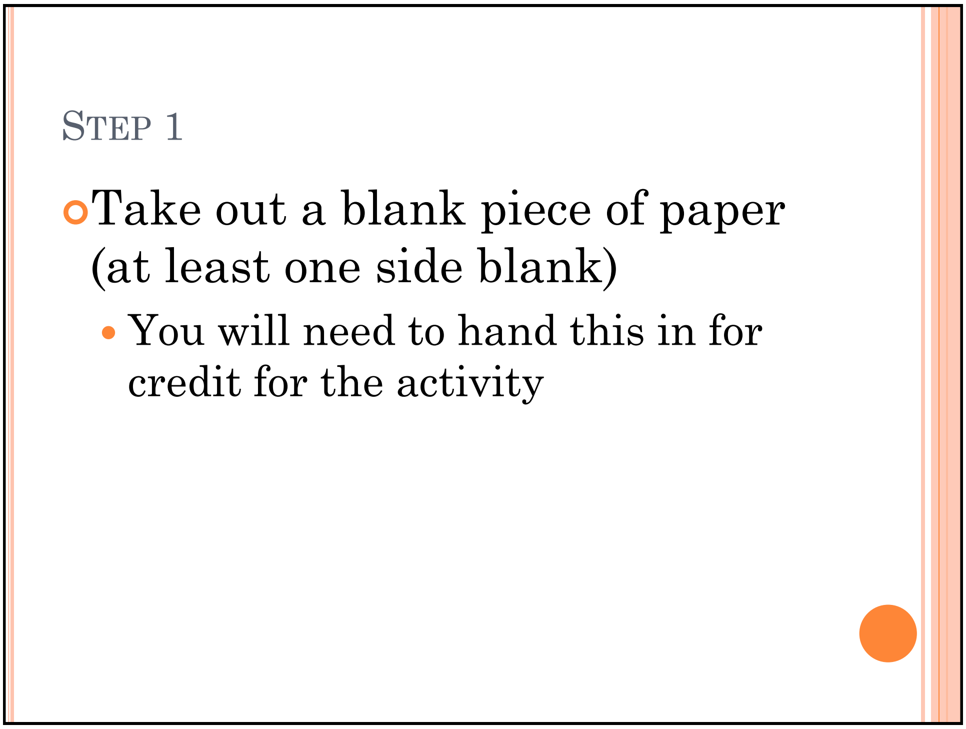
Announcements

- Lab 4 started in lab this week
- Lab 5 (Week of November 1st)
- Lab 6 (Week of November 8th)
  - All three are due at the same time, but starting them all the day before they are due is NOT recommended
- Exam 3 – November 15th (in lecture)



Monday October 25th

- In-lecture activity



Step 1

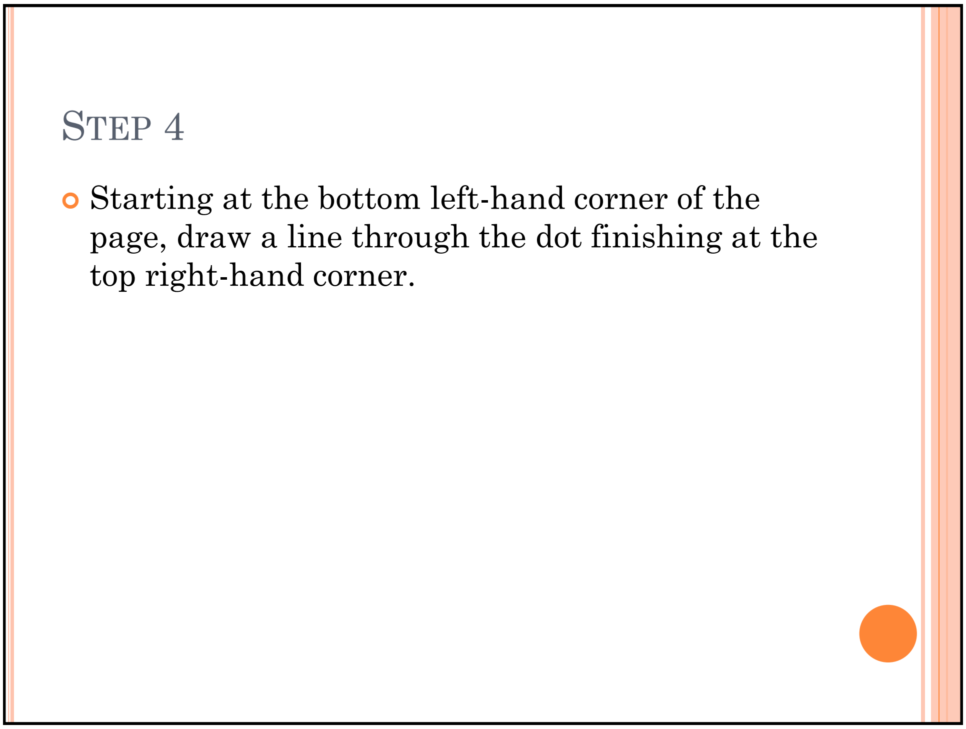
- Take out a blank piece of paper (at least one side blank)
  - You will need to hand this in for credit for the activity

Step 2

- Draw a dot at the center of the page

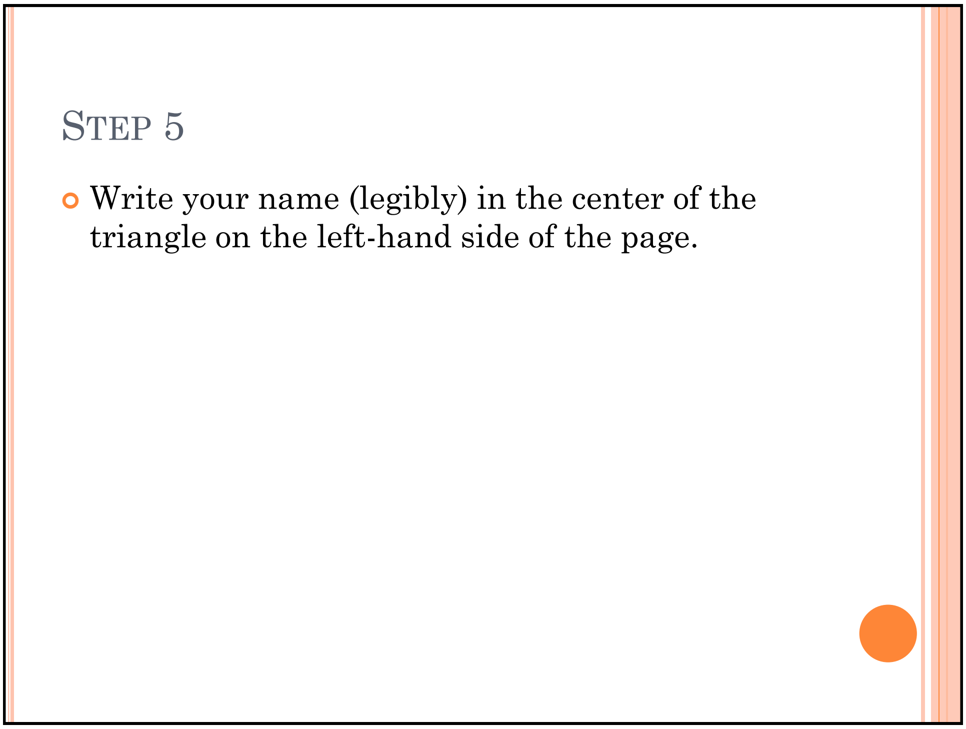
Step 3

- Starting at the top left-hand corner of the page, draw a straight line through the dot finishing at the bottom right-hand corner.



Step 4

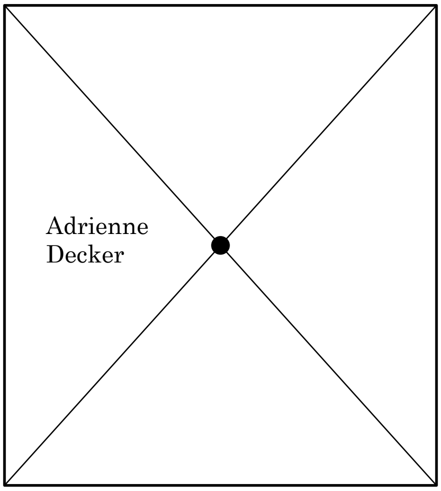
- Starting at the bottom left-hand corner of the page, draw a line through the dot finishing at the top right-hand corner.



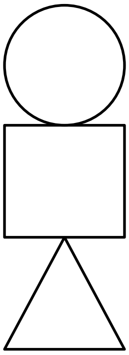
Step 5

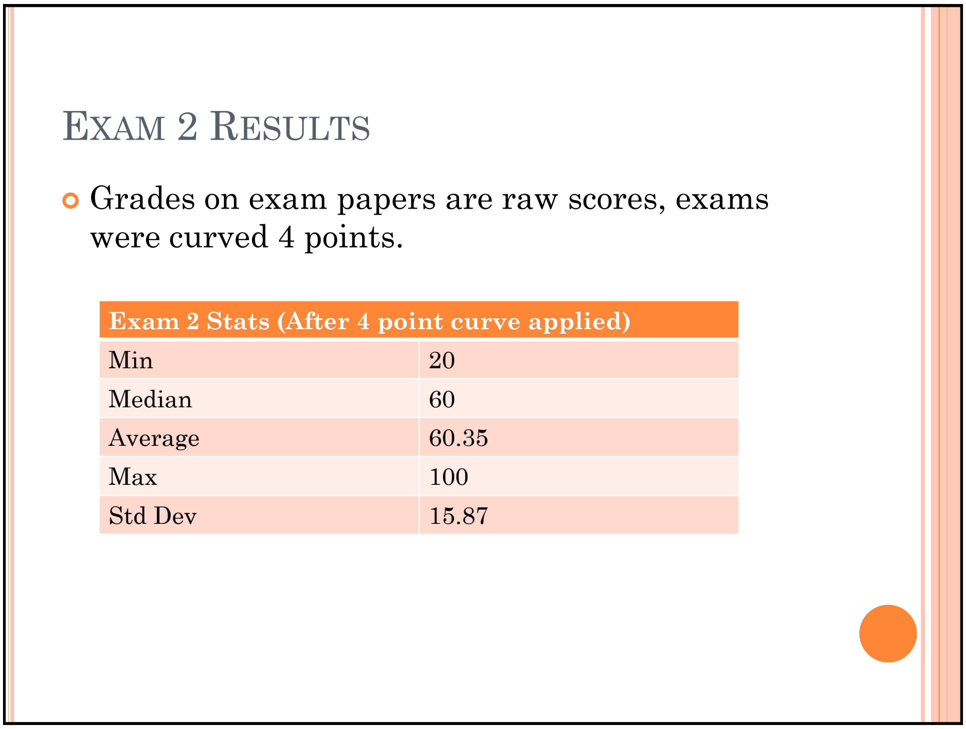
- Write your name (legibly) in the center of the triangle on the left-hand side of the page.

Is your Picture Correct?



New Picture

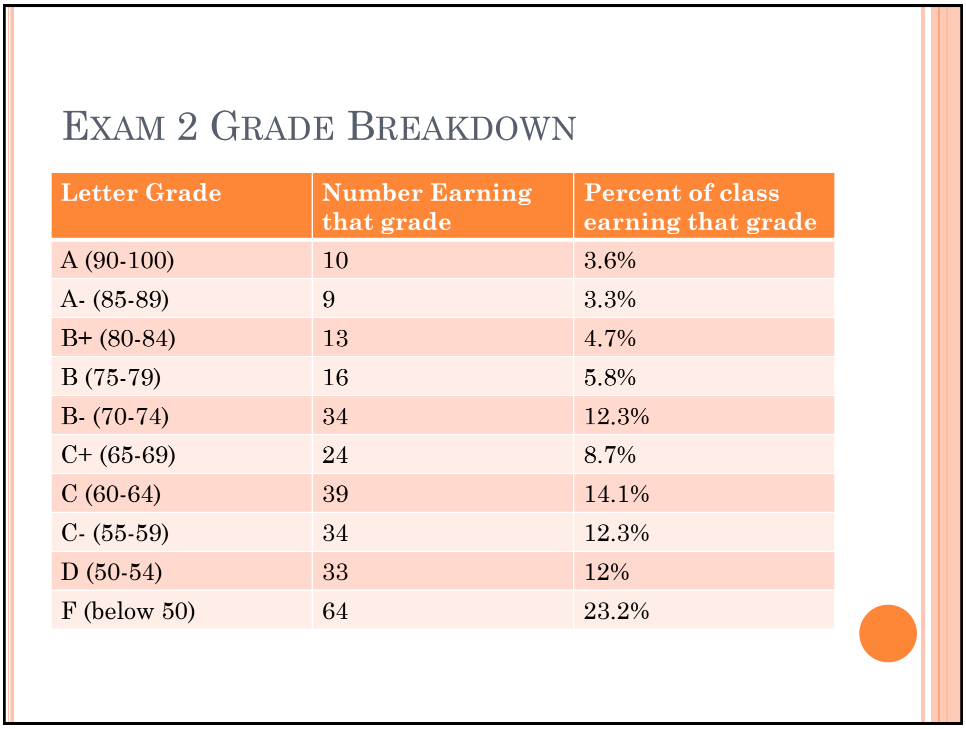




Exam 2 Results

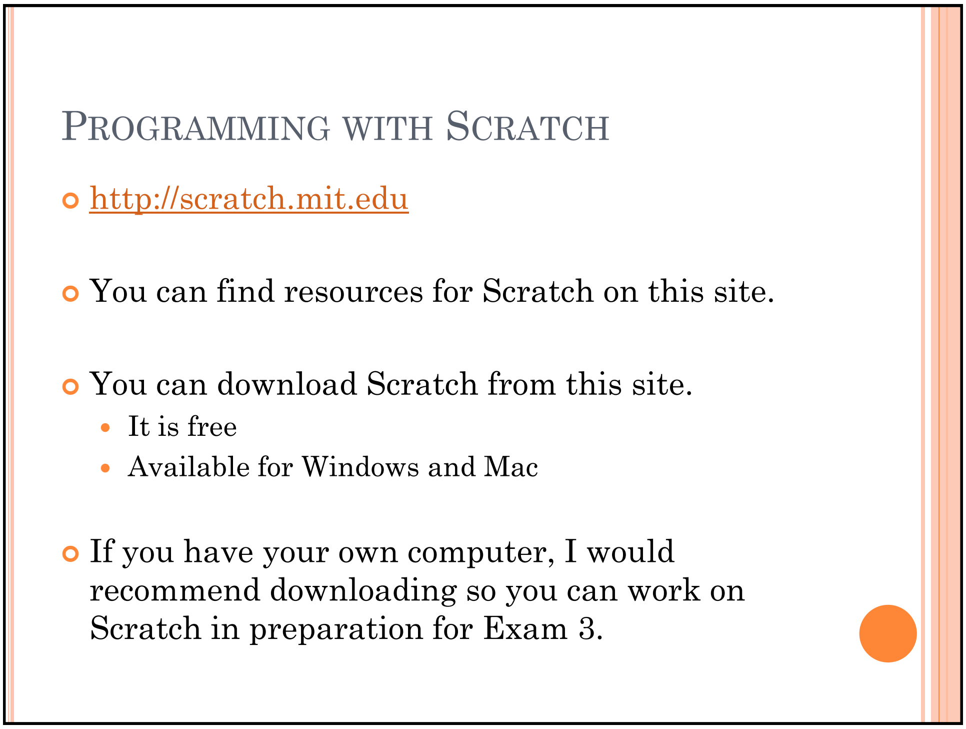
- Grades on exam papers are raw scores, exams were curved 4 points.

Exam 2 Stats (After 4 point curve applied)	
Min	20
Median	60
Average	60.35
Max	100
Std Dev	15.87



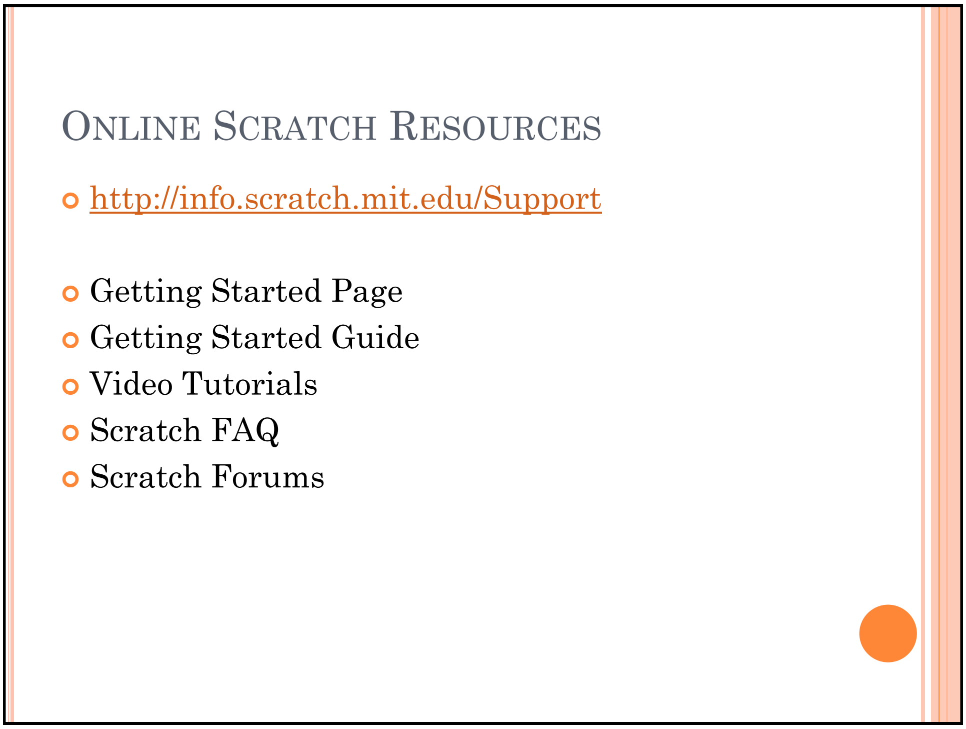
Exam 2 Grade Breakdown

Letter Grade	Number Earning that grade	Percent of class earning that grade
A (90-100)	10	3.6%
A- (85-89)	9	3.3%
B+ (80-84)	13	4.7%
B (75-79)	16	5.8%
B- (70-74)	34	12.3%
C+ (65-69)	24	8.7%
C (60-64)	39	14.1%
C- (55-59)	34	12.3%
D (50-54)	33	12%
F (below 50)	64	23.2%



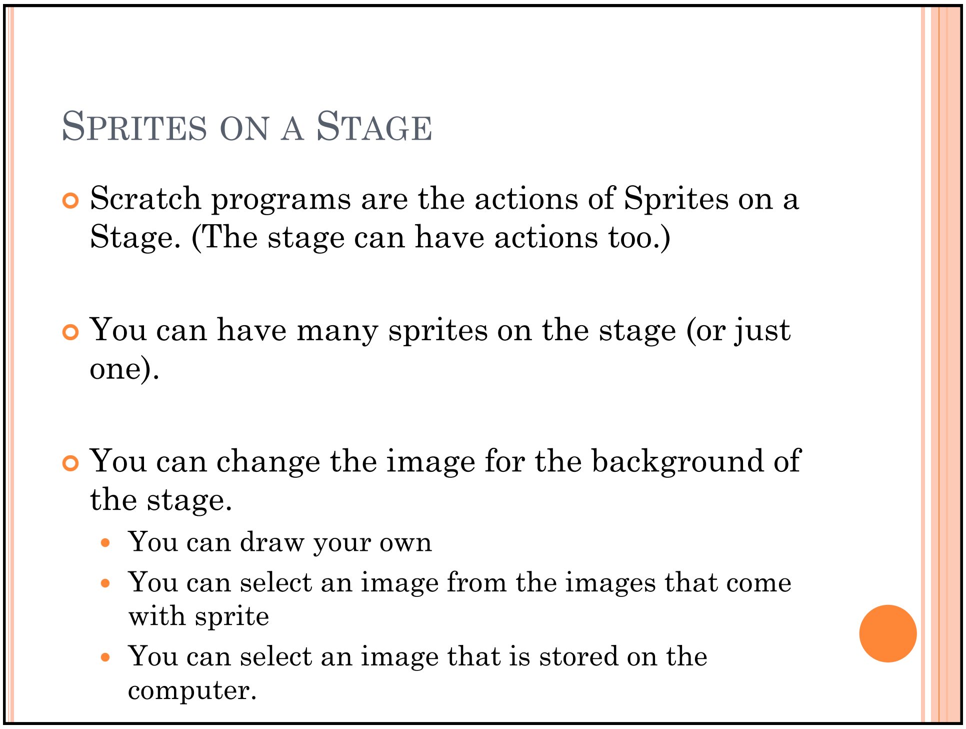
Programming with Scratch

- http://scratch.mit.edu
- You can find resources for Scratch on this site.
- You can download Scratch from this site.
  - It is free
  - Available for Windows and Mac
- If you have your own computer, I would recommend downloading so you can work on Scratch in preparation for Exam 3.



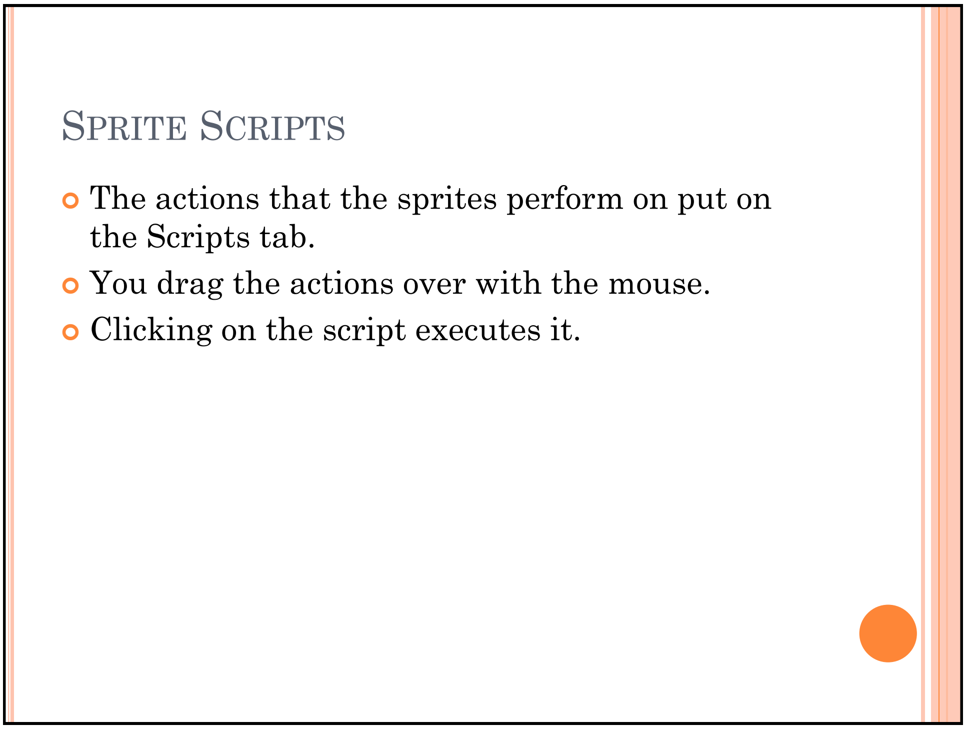
Online Scratch Resources

- http://info.scratch.mit.edu/Support
- Getting Started Page
- Getting Started Guide
- Video Tutorials
- Scratch FAQ
- Scratch Forums



Sprites on a Stage

- Scratch programs are the actions of Sprites on a Stage. (The stage can have actions too.)
- You can have many sprites on the stage (or just one).
- You can change the image for the background of the stage.
  - You can draw your own
  - You can select an image from the images that come with sprite
  - You can select an image that is stored on the computer.



Sprite Scripts

- The actions that the sprites perform on put on the Scripts tab.
- You drag the actions over with the mouse.
- Clicking on the script executes it.

Motion Blocks

- Move n steps
- Turn n degrees
- If on edge, bounce
- Move to a particular x and y position

Control Blocks

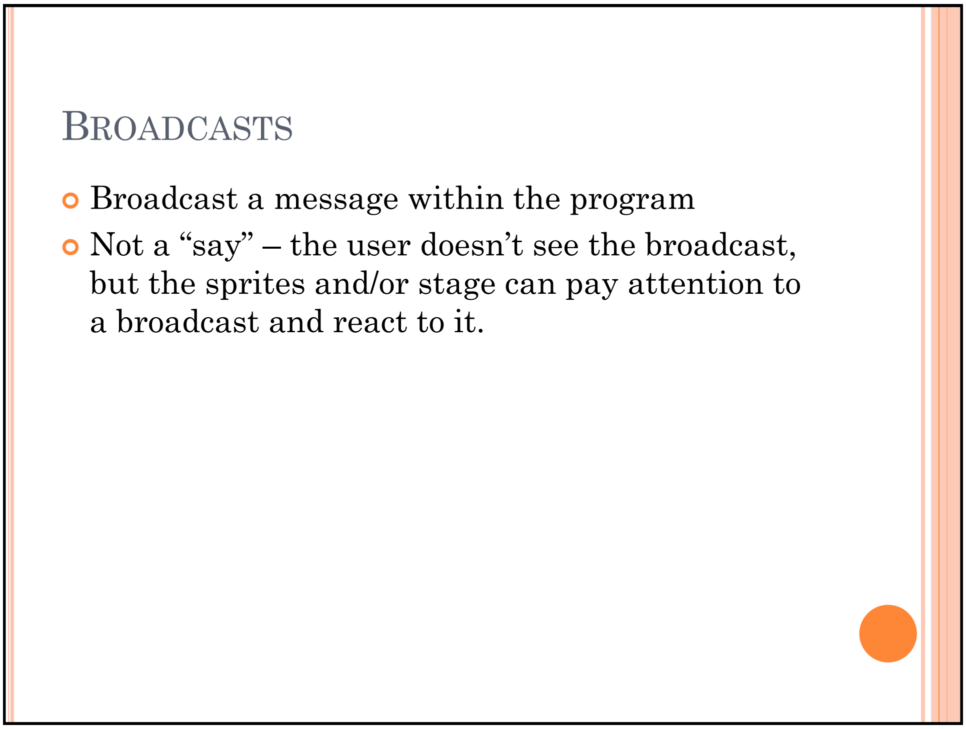
- “When green flag clicked”
  - A way to get the program to start
- When [stage/sprite] clicked
  - When user of program clicks on something, some action can happen
- When ??? key pressed
  - When user of program hits a particular key, some action can happen

CONTROL BLOCKS

- Forever
  - Runs the code in the forever block repeatedly until the stop button is pressed.
- Repeat n times
  - Repeats the code in the repeat block n times (n is specified by the programmer).
- Wait
  - Cause the actions in the program to pause for some specified amount of seconds

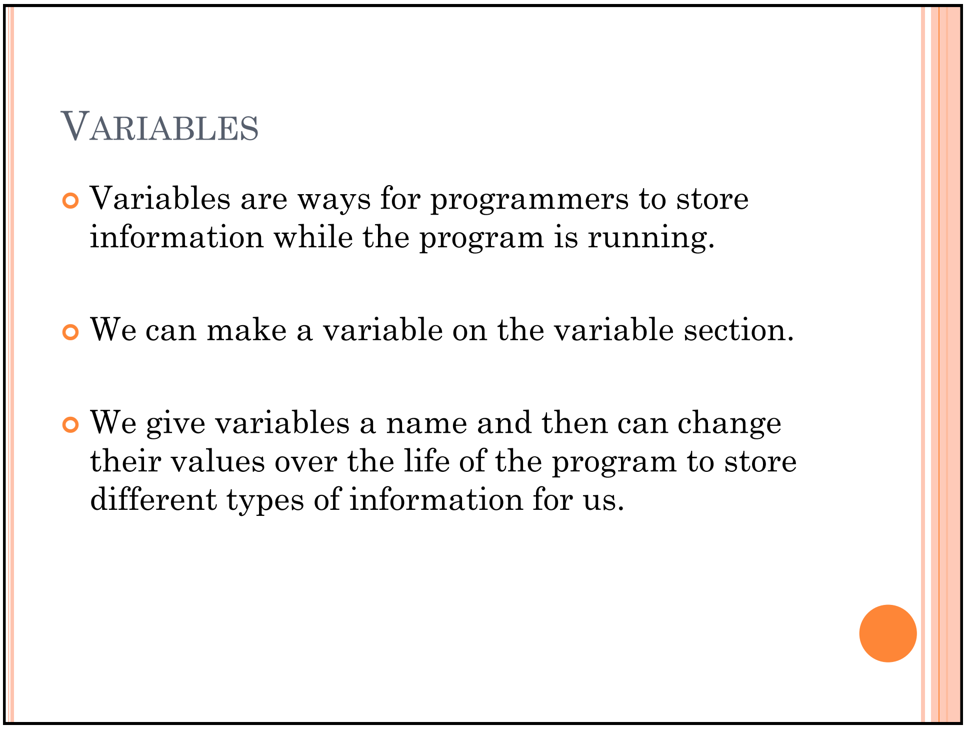
LOOKS BLOCKS

- Switch costumes
- Say something
- Think something
- Change image effects



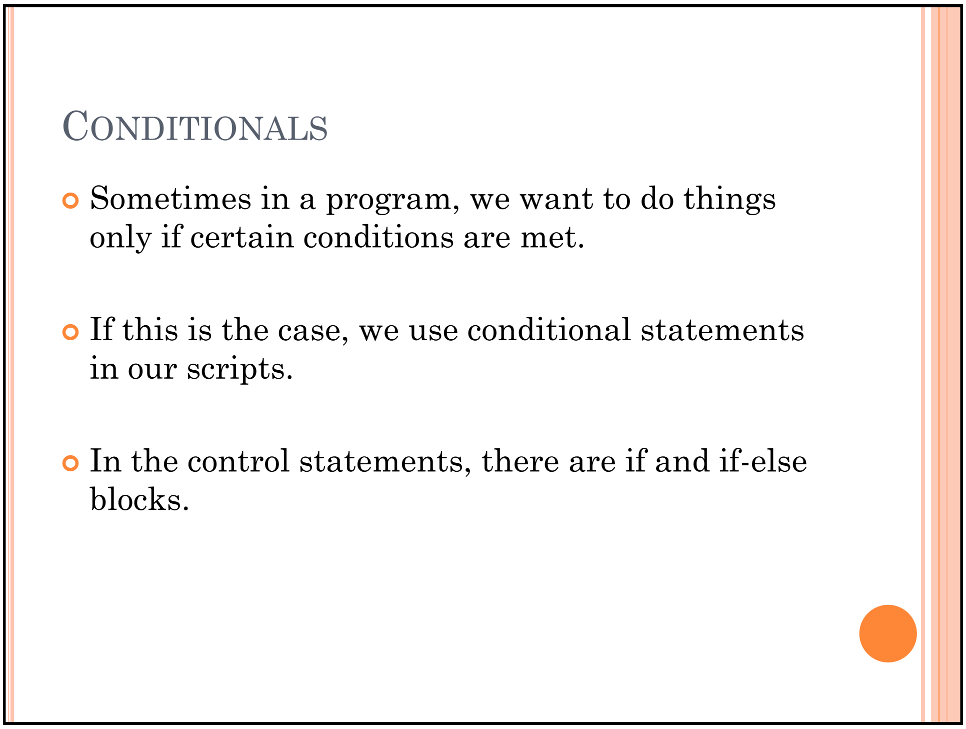
Broadcasts

- Broadcast a message within the program
- Not a “say” – the user doesn’t see the broadcast, but the sprites and/or stage can pay attention to a broadcast and react to it.



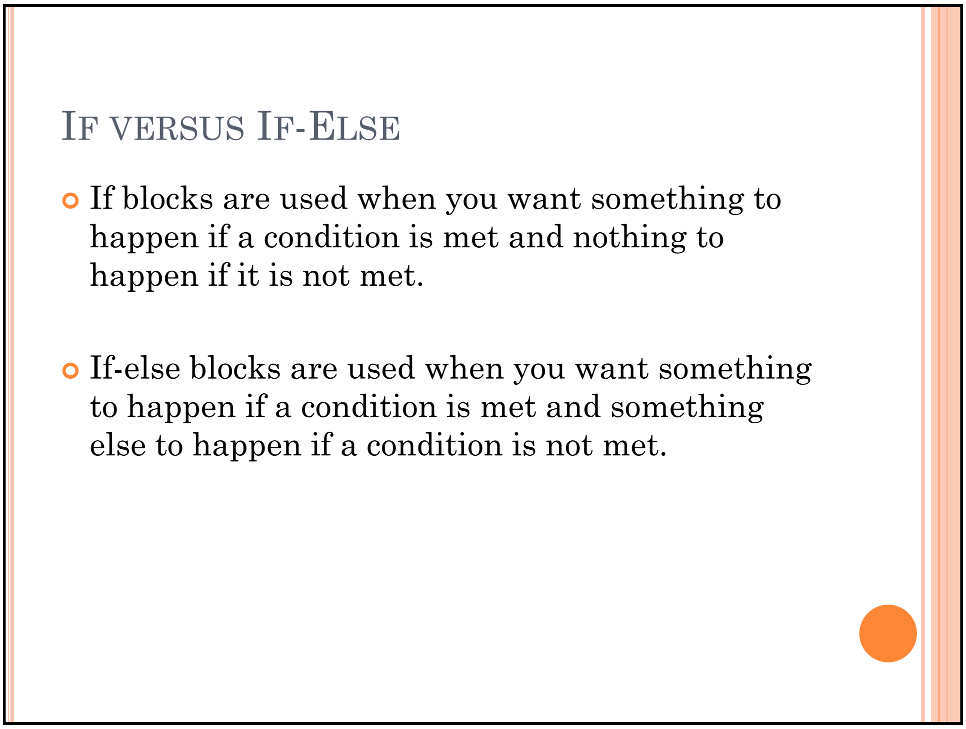
Variables

- Variables are ways for programmers to store information while the program is running.
- We can make a variable on the variable section.
- We give variables a name and then can change their values over the life of the program to store different types of information for us.



Conditionals

- Sometimes in a program, we want to do things only if certain conditions are met.
- If this is the case, we use conditional statements in our scripts.
- In the control statements, there are if and if-else blocks.



If versus If-Else

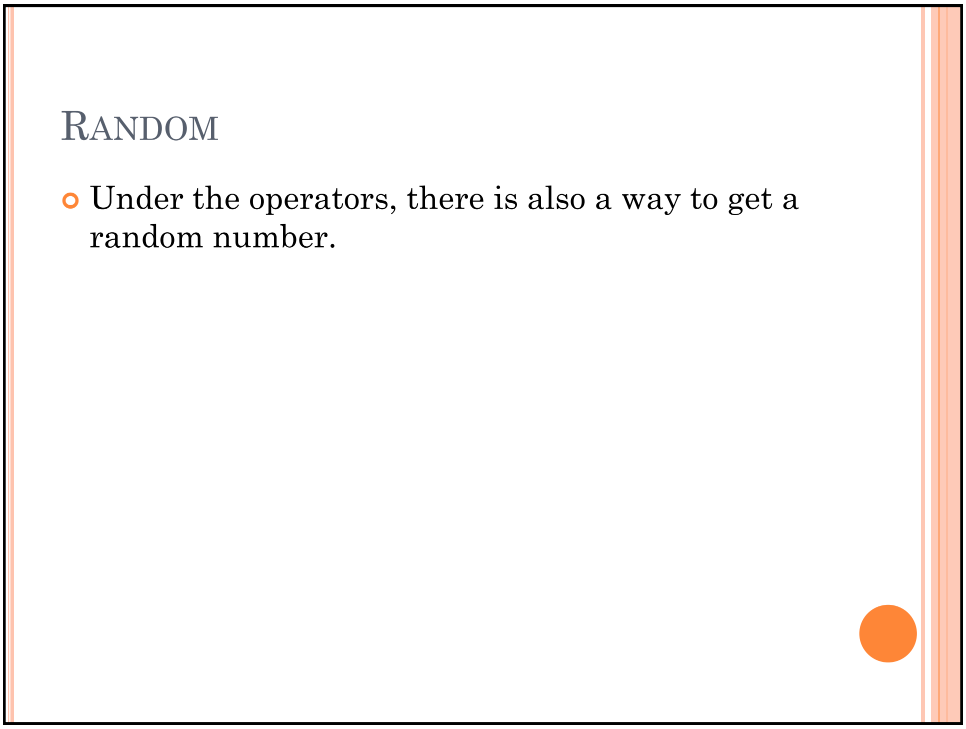
- If blocks are used when you want something to happen if a condition is met and nothing to happen if it is not met.
- If-else blocks are used when you want something to happen if a condition is met and something else to happen if a condition is not met.

Note the Hexagon

- Next to the word if in an if-block, we see a hexagon.
- This hexagon represents a condition. We can only put hexagons in this spot.
- We can find quite a few hexagons under Operators and Sensing
  - Sensing:
    - Touching (colors, other sprites)
    - Is a particular key pressed?
  - Operators: <   >   =

Combining Expressions

- Under Operators we also see “and” “or” and “not”.
- These operators allow us to make more complex conditions for our if’s and if-else’s.



Random

- Under the operators, there is also a way to get a random number.