



15-112  
Lecture 2

Week 5 Thu  
2-D Lists &  
Anim1: Events/MVC

Instructor: Pat Virtue

# Announcements

Pre-reading/checkpoint

None for next week

Quiz 4

Week 5 material

- Tue 10/4, in lecture

HW5

A few tips today

## Poll 3

Please fill out the TA feedback survey:

<https://tinyurl.com/15112-feedback>

D. Just answer D in the poll when done for at least one TA (don't select any other option)

# 2D Lists

# Word Search Top-down Design

## Twilight

E	I	V	O	L	T	U	R	I	N	E	T
W	D	D	N	W	E	R	E	W	O	L	F
A	V	E	W	P	E	T	C	I	V	L	U
O	A	L	A	L	O	W	L	T	B	S	A
N	G	L	D	F	A	I	I	T	A	P	A
E	A	L	G	T	I	L	P	S	W	A	N
L	S	A	N	E	R	I	S	N	V	T	A
L	E	A	I	D	O	G	E	V	A	K	R
U	A	L	K	W	T	H	W	C	M	C	R
C	A	L	A	A	C	T	E	R	P	A	E
L	O	E	E	R	I	L	S	L	I	L	T
A	A	B	R	D	V	T	V	G	R	B	L
U	C	B	B	N	O	O	M	W	E	N	O
R	B	O	C	A	J	G	O	N	S	A	V

TWILIGHT  
SAGA  
NEW MOON  
ECLIPSE  
BREAKING DAWN  
BELLA  
SWAN  
EDWARD  
CULLEN  
VAMPIRES  
WEREWOLF  
JACOB  
BLACK  
VICTORIA  
VOLTERRA  
VOLTURI

HW5

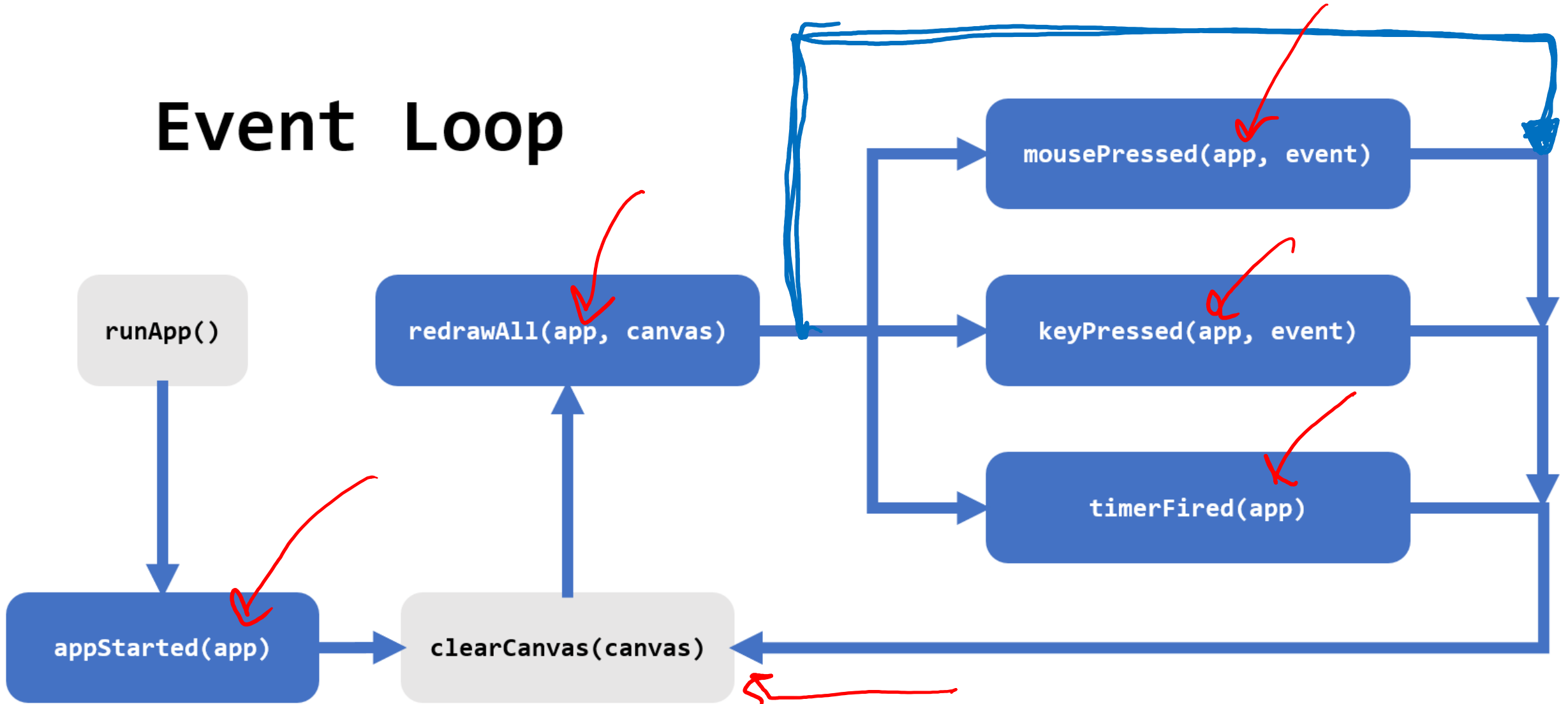
Animations 1:

Events and Model-View Controller



# MVC

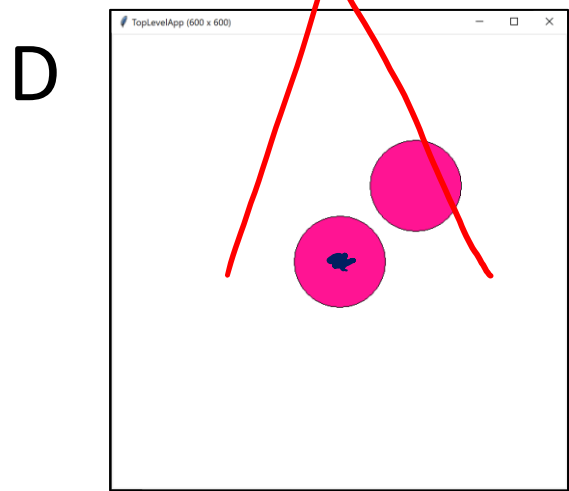
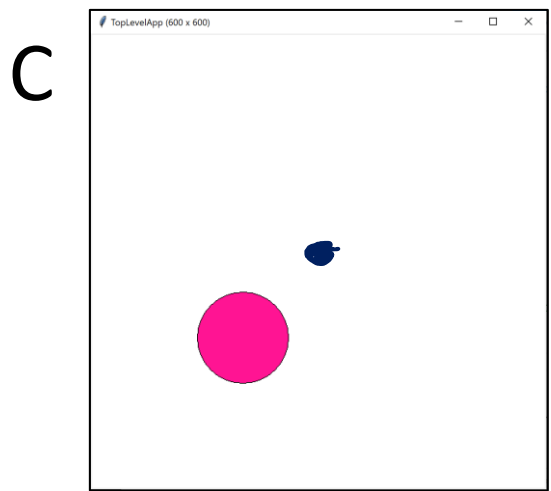
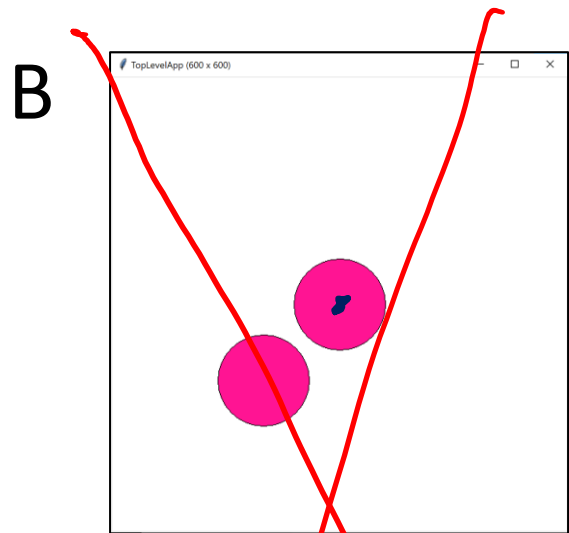
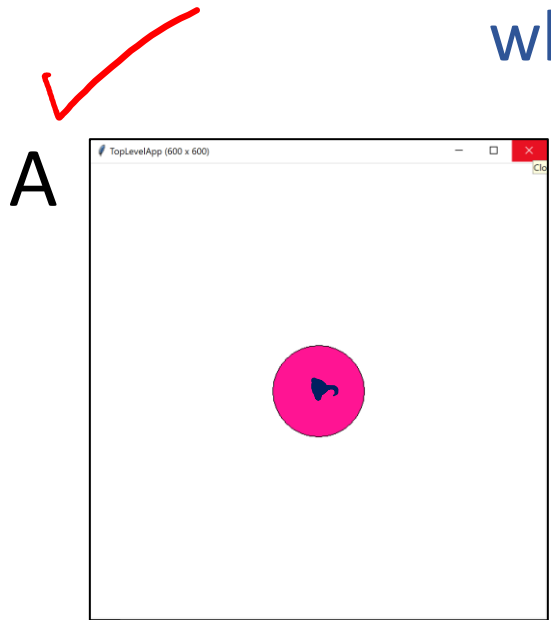
## Event Loop





# Poll 4

After clicking on coordinate  
 $x = 200, y = 400$ ,  
which is the correct display?



```
def appStarted(app):  
    pass
```

```
def mousePressed(app, event):  
    cx = event.x  
    cy = event.y  
    print(cx, cy)
```

```
def redrawAll(app, canvas):  
    cx = app.width//2  
    cy = app.height//2  
    r = 30  
    color = 'DeepPink1'  
    canvas.create_oval(  
        cx-r, cy-r, cx+r, cy+r,  
        fill=color)
```

```
runApp(width=600, height=600)
```

# MVC

Model: app  
cx  
cy

Controller

## Event Loop

View

