

Graphics Reference

```
canvas.create_text(x, y, text)
```

```
canvas.set_text(obj, text)
```

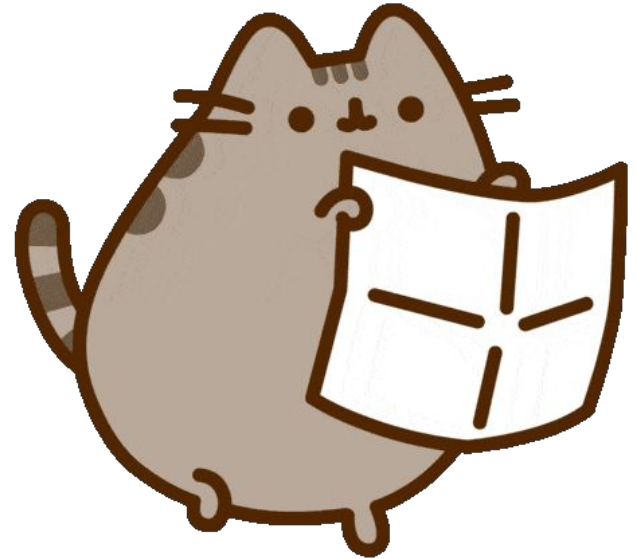
```
canvas.get_mouse_x()
```

```
canvas.get_mouse_y()
```

```
canvas.find_overlapping(x1, y1, x2, y2)
```

```
canvas.lower_to_back(obj)
```

```
canvas.moveto(obj, x, y)
```



Interactive Graphics

```
def main():  
    # create object  
    while True:  
        # get user input  
        # update graphics  
        # ex. add object to screen  
        canvas.update()  
    canvas.mainloop()
```

Loop, listen,
update!



Lists

```
words = ["Lists", "are", "so", "powerful"]
```

0 1 2 3

```
def main():  
    words = ["Lists", "are", "so", "powerful"]  
    print(words[0])  
    print(words[len(words)-1])  
  
    for word in words:  
        print(word)
```



Checking Mouse Clicks

```
def main():  
    # List of mouse clicks  
    clicks = canvas.get_new_mouse_clicks()  
    print(clicks[0].x)  
    print(clicks[1].y)
```

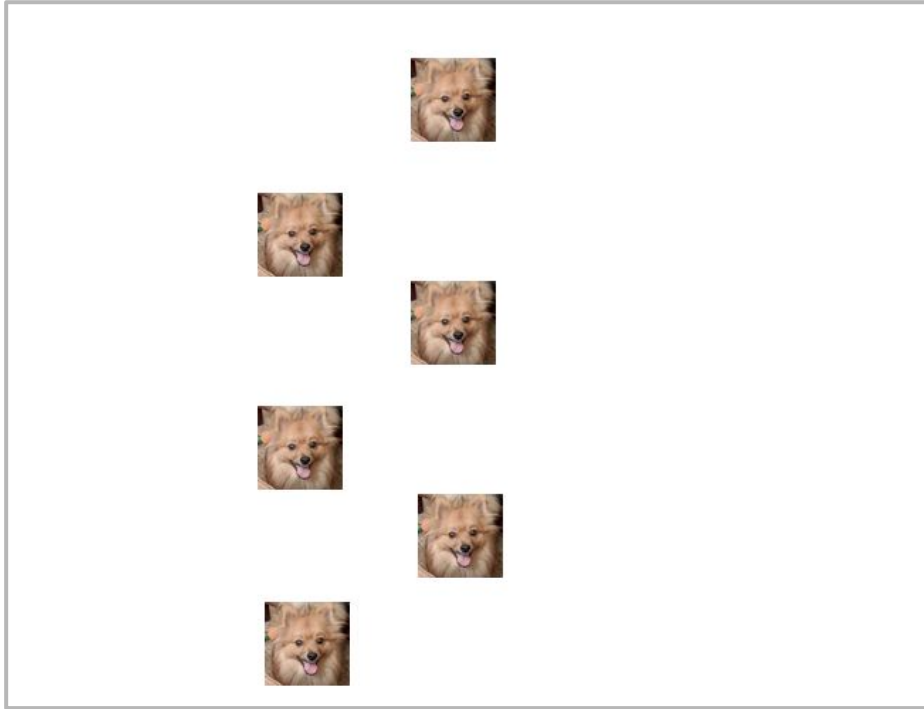
123

47



Section Problem

Making Tracks

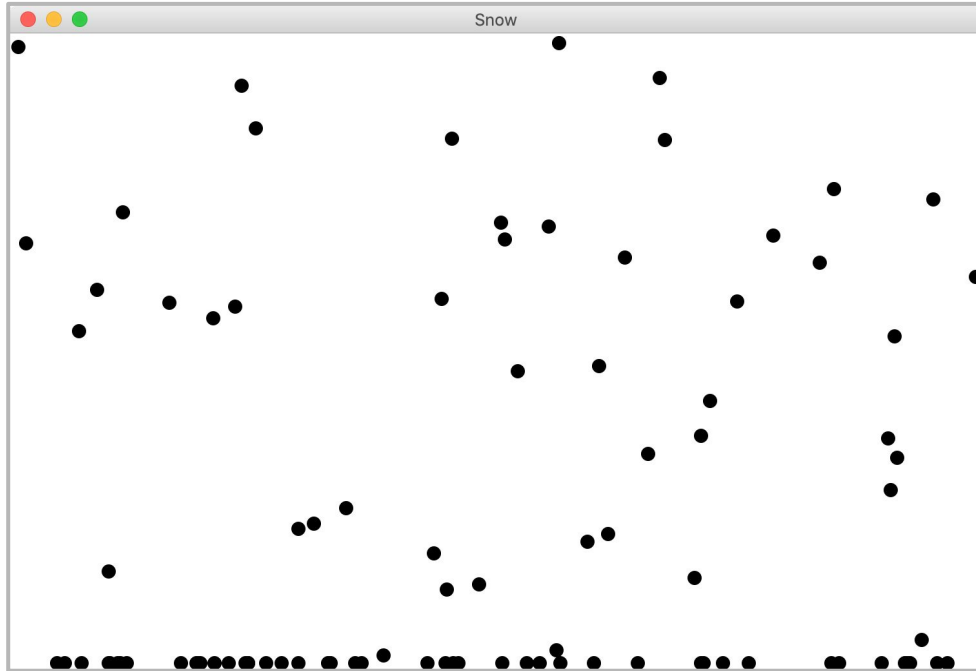


```
stamp = canvas.create_image(x,  
y, "images/simba-sm.jpg")
```

folder of the image



Snow



10% probability of new
snowflake at random
horizontal location



Animating Snow

```
def main():  
    # create object  
    snowflake = canvas.create_oval(x1,  
    y1, x2, y2)  
    while True:  
        # update graphics  
        canvas.move(<move snowflake>)  
        canvas.update()  
        time.sleep(delay)  
    canvas.mainloop()
```

What if
there's a
snowstorm?



Quickstart

Mouse Location

