Python + Pygame Cheat Sheet

Printing

```
# Example 1
name = 'Exceed User'
print(name)
>> 'Exceed User'
```

Basic Variable usage

```
name = 'Exceed User'  # String
age = 10              # Integer
speed = 15.50         # Float
Is_fast = True        # Boolean
```

Tuples

```
# Tuples cannot be modified

# Tuple Creation
white = (255, 255, 255)

# Element Accession
r = white[0]
```

List

```
# Lists can be modified

# Creation
friends = ['A','B','C']

# Element Accession
friend = friends[0]
→ 'A'

# Element Updation
friends[0] = 'D'
→ ['D','B','C']

# Element Deletion
del friends[0]
→ ['B','C']

# Element Addition
friends.append('D')
→ ['A', 'B','C', 'D']
```

Looping

For Loop

```
# Example 1
for i in range(5):
    print(i)
>> 0 1 2 3 4

# Example 2
for i in range(5, 11):
    print(i)
>> 5 6 7 8 9 10

# Example 3
lst = ['A', 'B', 'C']
for i in lst:
    print(i)
>> 'A' 'B' 'C'

# Example 4
lst = ['A', 'B', 'C']
for i in lst:
    print(i)
>> 'A' 'B' 'C'
```

While Loop

```
# Example 1
counter = 0
while counter < 5:
      print(counter)
      counter += 1
```

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```
>> 0 1 2 3 4

# Example 2
counter = 1
while counter <= 5:
      print(counter)
      counter += 1
>> 1 2 3 4 5
```

Conditions

```
# Example 1

age = 18
if age >= 65:
      print('Senior Citizen')
elif age >= 18:
      print('Adult')
else:
      print('Child')
```

Functions

```
# Example 1
def say_hi():
      print('Hi Exceed User!')

# Example 2
def say_hi(name):
      print('Hi ' + name + ' !')

# Example 3
def add(a, b):
      sum = a + b
      retutn sum

# Example 4
def average(num_1, num_2):
      Return ((num_1 + num_2)/2)
```

Pygame

Starter Template

```
# Get It Here
https://bit.ly/37KWb8K
```

Drawing Objects

```
# STEP 1: Use Starter Template

# Create Color
red = (255, 0, 0)
```

For RECT and ELLIPSE

```
# Object Dimensions and Location
# (x, y, width, height)
obj = (10, 10, 50, 50)

# Render object on-screen
# Rectangle
pg.draw.rect(screen,red,obj)

# Ellipse
pg.draw.ellipse(screen,red,obj)
```

For LINE

```
# Object Dimensions + thickness
# (x, y)
point_1 = (10, 10)
point_2 = (20, 20)
thickness = 5

# Render object on-screen
pg.draw.line(screen, red,
point_1, point_2, thickness)
```

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```
# Get a working example here
https://bit.ly/2VhhBbd
```

Moving an Object

```
# Define Object
obj = pg.Rect(100, 100, 50, 50)

# Define Movement Speed
right = 10
left = 10
up = 20
down = 20

# Execute in the main while loop

# Fill Screen to erase the
# previous frame
screen.fill(white)

# To move an object to the right
Object[0] += right

# To move an object to the left
Object[0] -= left

# To move an object to up
Object[1] -= up

# To move an object to down
Object[1] += down

# NOTE: render object after
# setting position
pg.draw.rect(screen, red, obj)

# Get a working example here
https://bit.ly/2PoiScL
```

Accessing Mouse Data

```
# Add To While Loop

# Required in-order for mouse
# functioning
pg.event.pump()

# Getting mouse position
# (x-axis, y-axis)
pos = pg.mouse.get_pos()

# Getting button events
# (left, scroll-wheel, right)
buttons = pg.mouse.get_pressed()


# Get a working example here
https://bit.ly/2uQpSrO
```