

1. Creating random colors

The code below creates a 50×50 image using the SimpleImage library. It assigns a **random color** to every pixel. Fill in the blanks to complete the program. A single color value is in the range of 0 - 255 inclusive.

Reminder:

The random module can generate random numbers for us.

```
random.randrange(start, end)
```

returns a random integer from start (included) to end (not included).

```
from simpleimage import SimpleImage
import random

image = _____

for x in range(_____):
    for y in range(_____):

        red = _____
        green = _____
        blue = _____

        image.set_rgb(x, y, red, green, blue)

image.show()
```

2. Drawing with pixels

The code below creates a 3×3 white image. It then colors some pixels black. Draw the final image by shading the pixels that become black.

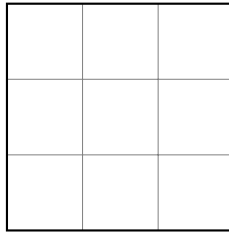
```
image = SimpleImage.blank(3, 3)

for i in range(3):
    image.set_rgb(i, i, 0, 0, 0)

image.set_rgb(0, 2, 0, 0, 0)
image.set_rgb(2, 0, 0, 0, 0)

image.show()
```

Draw the output image:



3. Inverting an image

Write a function that inverts an image and returns the inverted image.

Each pixel's color is represented as (red, green, blue), where each value is between 0 and 255. To invert a color, replace each RGB value with 255 minus its current value.

For example: (0, 100, 255) becomes (255, 155, 0).

```
def invert(image):
```
