Problem YE

Source Filename: ye/solution.py

Rico Picone

1. Packages

import random

2. Functions

```
def rand_step(x, d, ymax, wrap=True):
    """Returns the sum of x and a random float between -d and d"""
   step = random.uniform(-d, d)
   y = x + step
   if wrap:
        if y > ymax:
           y = y - ymax
        elif y < 0:</pre>
            y = ymax + y
   else:
        if y > ymax:
            y = ymax
        elif y < 0:</pre>
            y = 0
    return y
def rand_steps(x0, d, ymax, n, wrap=True):
    """Returns a list of n floats sequentially stepped from x0"""
   values = [x0]
   for i in range(0, n):
        values.append(rand_step(values[-1], d, ymax, wrap=wrap))
   return values
def print_slider(k, x):
    """Prints k '-' characters except for that with index
   closest to x, which prints |
   x_rounded = round(x)
```

```
if x_rounded < 0:</pre>
        x rounded = 0 # Coerce to 0
    elif x_rounded > k:
       x rounded = k - 1 # Coerce to max index
    for i in range(0, k):
       if i == x_rounded:
            print("|", end="")
        else:
            print("-", end="")
    print("") # Line break applied
def rand sliders(n, k, x0=None, d=3, wrap=True):
    """Prints n random sliders with k characters"""
    if not x0:
       x0 = k / 2 # Start in the middle
   values = rand steps(
       x0, # Initial value
       d, # Max step size
       ymax=k - 1, # Subtract 1 because 0-indexed
       n=n, # One value per slider
       wrap=wrap, # Pass wrap
   for x in values:
        print_slider(k, x)
```

3. Call Functions and Print

```
print("rand_sliders(25, 44, x0=2, wrap=True):")
rand_sliders(25, 44, x0=2, wrap=True)
print("rand_sliders(20, 44, x0=42, d=5, wrap=False):")
rand sliders(20, 44, x0=42, d=5, wrap=False)
rand_sliders(25, 44, x0=2, wrap=True):
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|-----
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-|-----<del>-</del>--
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-----|-<sup>-</sup>--
```

- `
rand_sliders(20, 44, x0=42, d=5, wrap=False):
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