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## Random Walk Bonus Assignment

```
In [1]:
         import random
         import numpy as np
         import matplotlib.pyplot as plt
In [2]: prob = [0.0, 0.90]
In [3]: # statically defining the starting position
         start = 0
         positions = [start]
In [4]:
         # creating the random points
         rr = np.random.random(20)
         downp = rr < prob[0]
         upp = rr > prob[1]
In [5]: for idownp, iupp in zip(downp, upp):
                 down = idownp and positions[-1] > 4
                 up = iupp and positions[-1] < 10
                 positions.append(positions[-1] - down + up)
         # plotting down the graph of the random walk in 1D
In [6]:
         plt.plot(positions)
         plt.show()
          2.00
         1.75
         1.50
         1.25
         1.00
          0.75
          0.50
          0.25
          0.00
               0.0
                    2.5
                         5.0
                               7.5
                                   10.0
                                         12.5
                                              15.0
                                                   17.5
                                                         20.0
```

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