

- We model the recovery as follows with the chance of recovery $r=1/d$

```
while i < len(state):
```

```
if state[i] == 1:
```

```
if random.random() < r:
```

```
new_state[i] = 2
```

- To study the large scale picture, we want the output to be the number of people infected at every stage, instead of the exact state of the individuals.
- We use the following code instead of creating counter variables
- `nums[0]`, `nums[1]`, `nums[2]` represent respectively the number of susceptible, infected and recovered people at the end of every time step
- Key idea: Indices in a list can be a computed quantity and can be used to correspond to something else!

```
i = 0
```

```
nums = [0, 0, 0]
```

```
while i < len(state):
```

```
nums[state[i]] += 1
```

```
i += 1
```

- Syntax tidbits:
 1. `i+=1` is the same as `i=i+1`
 2. `print` function takes multiple inputs
 3. `sep`: used to separate the outputs in `print` using a specified separator (eg. a comma)