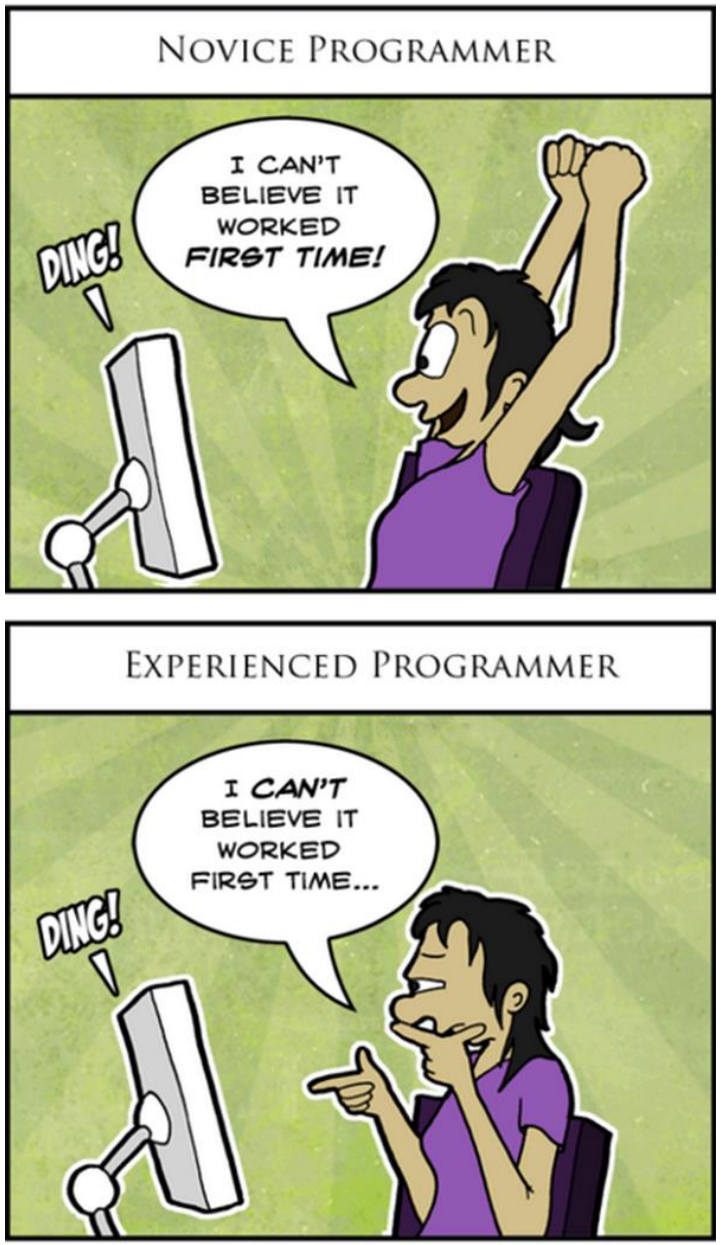
CSc 110, Spring 2018

Lecture 30: Lists of Lists



Exercise

Write a function called `flip` that takes a list of lists and two columns and swaps their contents. For example if `flip(data, 2, 3)` were called on the following list

```
data = [[1, 2, 3], [4, 5, 6], [7, 8, 9]]
```

data would contain the following afterwards:

```
data = [[1, 3, 2], [4, 6, 5], [7, 9, 8]]
```

Exercise

Write a function called `create_matrix` that takes a width and a height as parameters and returns a list of lists that is width by height and contains the numbers 0 to width - 1 in each row. For example a call to `create_matrix(5, 3)` would return the following list of lists:

```
[[0, 1, 2, 3, 4], [0, 1, 2, 3, 4], [0, 1, 2, 3, 4]]
```

Creating Lists of lists

- `list = [[0] * 4] * 5` will NOT create a list of lists
  - This will create a list with 5 spots that all contain the SAME list that is 4 long.

- Instead, write the following:

```
list = []
for i in range(0, 5):
    list.append([0] * 4)
```

Mountain peak

Write a program that reads elevation data from a file, draws it on a `DrawingPanel` and finds the path from the highest elevation to the edge of the region.

Data:

```
34 76 87 9 34 8  22 33 33 33 45 65 43 22
5  7  88 0 56 76 76 77 4  45 55 55 4  5
…
```