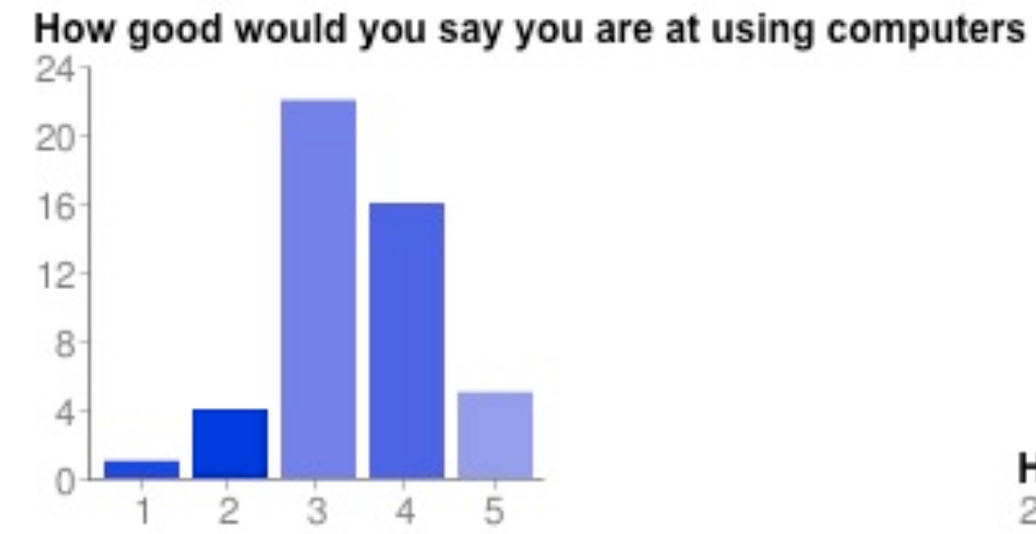
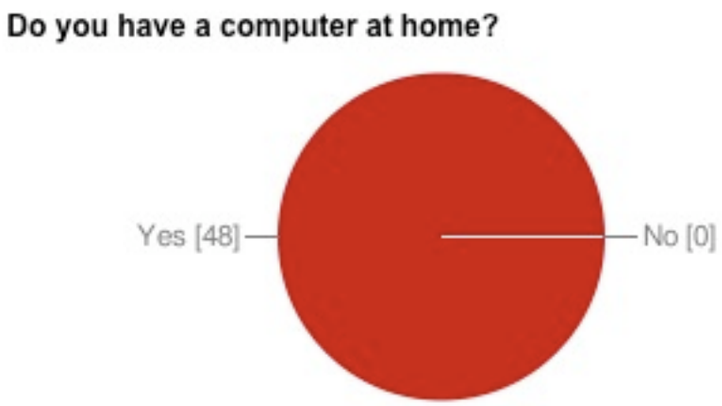
Creative Computing

Surveys, variables, loops, math, print and style

Surveys


How good would you say you are at using computers
24
20
16
12
8
4
0
1
2
3
4
5


Do you have a computer at home?
Yes [48]
No [0]


How excited are you about this class?
24
20
16
12
8
4
0
1
2
3
4
5

Surveys

- A lot of people are here accidentally but have great attitude
- Some night owls
- Lots of great hobbies: DJs, orienteering, guitar, dance
- People want to write: games, cellphone apps, apps for webcams, XO laptop

Look forward to

- Learning card tricks on Friday
- Ms. Martin out of town October 1 and 2
    - You mess with the sub, I write you a referral no questions asked
- Microsoft guest speaker mid-October

Tomorrow: Quiz

- Open notes
- You take it
- I tell you what you did wrong
- You get full credit
- Not a bad deal, right?
- A similar "real" one next week

Grading Reminder

- Show up
- Have a good attitude
- Try hard and try lots of things, don't be afraid to make mistakes
- Ask for help
- You get an A or a B

Style

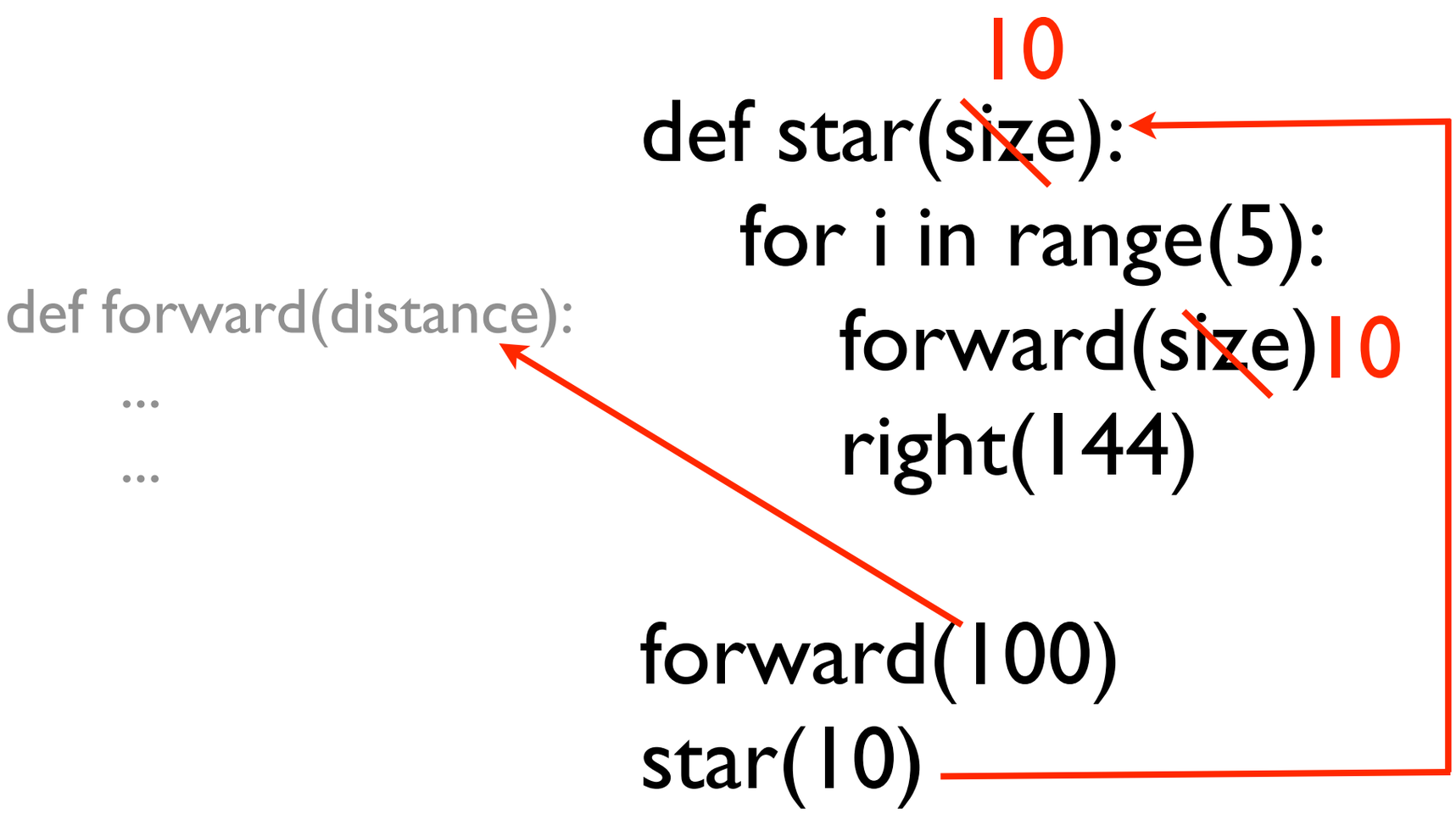
- Group all functions at top
- Code that Python executes is at bottom
- Use as many functions as you can
- Aim for human readability
- Use comments on tricky bits

Order of execution

- Python starts at the top
- Skips all definitions
- Executes commands sequentially, "jumping" into functions

Parameters revisited

- When Python hits a function call with a parameter, it replaces parameter name with value



Masking

- Be careful of using the same name multiple times!
- For example, can't use color as a parameter name if you want to also use the color function
- In this case, the color parameter takes over

Python math

- + adding or string concatenation
- - subtraction
- / division
- * multiplication or string multiplication

Print

- A Python function
- Display values to the user
- Literal strings must be in quotes
- Special characters
  - \n for newline
  - \t for tab

```
print(<value>)
print(25 * 6)
print(“hello”)
```

Variables

- Store values in memory for later use
- Have a name
- Name must start with letter and can't have spaces (use _ instead)
- Name should be descriptive

```
dollars_owed = 10
tax = dollars_owed * .08
```

for loops revisited

- range(<number>) is a function that gives back a list of numbers
- The i is a variable
- i gets a new value each time around the loop

```
for i in range(<number>):
    ...
    ...
```

Your turn

- Code to calculate a cumulative sum?
  - Ex: sum(5) should print 15 because 5 + 4 + 3 + 2 + 1 = 15
- Give my stars a gradient
  - Use color(0-1, 0-1, 0-1)