

Warm up discussion problem:

Once upon a time there was a young missionary heading for Disneyland in California who got lost along the way. The missionary ultimately came to a fork in the road. The missionary knew that one branch of the fork led to Disneyland, and the other led out to the desert where legend said the hills have eyes. At the fork, there sat a member of a local motorcycle gang. The missionary knew that there were only two motorcycle gangs in the area. One gang always told the truth. The other gang always told lies. Both gangs lived by a code that said they would only answer a single question to anyone outside of their gangs. What one question can the missionary ask the biker in order to learn which road leads to Disneyland?

Workshop: *Computer Programs*

1. What do you expect from the following program?

```
print ("Hello CSC161")
print ("Programming is *sooo* cool!")
print ("But it takes time and patience.")
```

2. What about this one?

```
def main():
    print ("Hello CSC161")
    print ("Programming is *sooo* cool!")
    print ("But it takes time and patience.")

main()
```

3. And this one?

```
def main():
    print ("Hello CSC161")
    print ("Programming is *sooo* cool!")
    print ("But it takes time and patience.")
```

4. What is the output of the following program?

```
def main():
    print("This appears first, so it will print first")
    print("This is the second line")

main()
```

5. If the output of the previous program is not what you would expect, how can you fix it?
6. Trace through the Chaos program by hand using 0.15 as the input value. Show the sequence of output that results:

```
def main():
    print("This program illustrates a chaotic function")
    x = float(input("Enter a number between 0 and 1: "))
    for i in range(10):
        x = 3.9 * x * (1 - x)
        print(x)

main()
```

7. Write a detailed algorithm for making a peanut butter and jelly sandwich. You should assume that you are talking to someone who is conceptually able to do the task, but has never actually done it before. For example, you might be telling a young child.