

CS16 Section 2 Mini-Assignment

Due in your section the week of:

2/12 - 2/14

Problem 1: Reversing a String

This week in section, you will be performing your first “code critique”. This is when you take time to look at previously written code, and discuss its merits and downfalls. This is in terms of both functionality and style. Here, you will be looking at the function `rreverse(s)`, which takes a string and reverses the order of its characters.

Before section this week, we would like you to take a look at the code below and decide if this is an operational function. If you decide it doesn’t work, please correct the code so that it does work. Make sure you look at edge cases too. If you are unsure on whether it works or not, feel free to open up your python interpreter and try it out. Make sure you comment on style as well! Please have your comments written out.

```
def rreverse(s):
    """
    Consumes: string, s.
    Produces: s with characters in reverse order
    Example:
        rreverse("hello world") -> "dlrow olleh"
        rreverse("rbrown4") -> "4nworbr"
        rreverse("ctoupin") -> "nipuotc"
        rreverse("1234") -> "4321"
    """
    if s == "":
        return s
    else:
        return rreverse(s) + s[0]
```

Problem 2: Inductive Proofs

In class, you learned what an inductive proof is. This is a really valuable proof technique, but can be a little hard to grasp at first. Luckily, inductive proofs are generally well structured, and have very explicit steps that need to be taken in order to be completed. We’re not asking you to complete an inductive proof now. We just want you to list the steps that should be taken when you actually do complete an inductive proof. We think that there are about 4, but feel free to put more or less if you think that’s appropriate.