

CSE 160 Section 3 Problems

1. Write a function `odd(num)` that returns `True` if an integer is odd and `False` if an integer is even. Your function should take in an integer `num` and return a Boolean.

2. Write a function `avg_age(ages)` that calculates and returns the average of a list of ages. You are not allowed to use Python's built in `sum()` function. Your function should take the list `ages` as a parameter and return the average. For example, given `ages = [20, 21, 22]`, `avg_age(ages)` should return 21.

3. Given a list of students' names (`student_lst`), write a function `max_height(student_lst)` that returns the maximum height in inches. The function `get_height(student)` is given to you, and will return the height (in inches) of any student.

- For example, `get_height("Nicholas")` will return 75
- Say a class has 5 students, Ella (68 in), Martin (72 in), Lilly (49 in), William (50 in), and Simon (70 in). Because Martin is the tallest student, `max_height(["Ella", "Martin", "Lilly", "William", "Simon"])` should return 72 in.

- Implement the function `max_height(student_lst)`:

- What is the return type of `max_height(student_lst)`?

- Suppose you printed the max height instead of returning it. What would be the return type of `max_height(student_lst)`

4. Write a function `count_letters(word_list, target)` that counts the number of times a target letter appears in a list of strings and returns it. For example, given `word_list = ["this", "is", "a", "list"]` & `target = "s"`, `count_letters(word_list, target)` should return 3.

5. Write a function called `budget_saver(cost, budget)` that takes the price of a product and a budget. The function should return "too expensive" if the price is more than the budget, "great deal" if the price is less than the budget, and "okay" if the cost and budget are equal. For example, `budget_saver(250, 100)` returns "too expensive".

6. Write a function called `among_us(crewmates, imposter)`, where given a list of crewmates and the names of an imposter, returns `True` if the name of that imposter is in the list of crewmates. Do not use the Python keyword "in". For example, `among_us(["cyan", "yellow", "pink"], "pink")` returns `True`.