

Week 6 In-class Exercises

- 1) Warm-Up: Write a function that takes a number between 0 and 100 and prints out the letter grade (A is 90-100, B is 80-89, C is 70-79, D is 60-69, F is 0-59)
- 2) If it is X degrees Celsius, it is (9/5)*X + 32 degrees Fahrenheit. Write a function that takes in degrees in C and returns the temperature in F.
- 3) Write a function that converts decimals (like 0.83) to percentages (83). You should return the percent, not print it out.
- 4) Write a function that takes in an integer and returns that number raised to the fourth power (raise_to_the_fourth(3) should return 3^4 = 3*3*3*3 = 81)
- 5) On weekdays, you wake up at 6am. On weekends, you wake up at 9. Write a function that takes in an integer representing the day of the week (0=Sunday, 1 = Monday, etc.) and returns the time you should set your alarm for.
- 6) On holidays, you get to sleep until 11. Improve your last function to also take in a Boolean parameter, is_holiday, and return the correct alarm time.
- 7) Write a function that takes in an integer and prints that many asterisks (*) in a row:

```
print_stars(5)
>> *****
```

8) Write a function that takes in two integers, a length and a width, and prints a rectangle of asterisks. This function should call your function from 7.

```
print_star_rectangle(5, 3)
>>****
    ****
```

9) Write a function that prints empty squares.

- 10) Write a function raise_to_power that takes in two integers, base and exponent, and returns the base raised to the exponent. For example, raise_to_power(4, 2) should return 4^2 = 16
- 11) Use your functions from #1 and #3 as well as the compute_score example from the slides to build an interactive grade calculator. The function should ask the user to input the total points for an assignment and the student's score, then compute their score, convert it into a percentage, and then print out the letter grade.