Deliverable 1).

The main reason I decided to base my python project on what I did is that I am currently in a nutrition class as an elective. I wanted to code something in python that can take your height in inches, and calculate and output what the perfect weight (according to many on google) is for your specific height and gender to be a healthy weight.

My hypothesis was that if I wanted to be a healthy person, how would I go about calculating these numbers? Should I take into effect the gender of the person at hand?

I didn’t necessarily use any data that was from a different source directly inputted into the code, but I did do some research to get the specific numbers and calculations for peoples heights and genders and weights and inputted those into the code to calculate the weight for the user. I guess some biases and technical issues I could have with the data at hand is the fact that there isn’t an “exact” number weight you should be at to be healthy, there’s more of a range of weight probably around 3 pounds over and under the exact number given.

First step would be to predetermine some variables like min and max height, and the inputted height as well. Next you would ask the user whether the user is a male or female because the conversion numbers are different for each. Next it would take the answer from the user input and start using the specific function for the height conversion. Next we get the male or female conversion depending on what they have inputted, and that will be printed to you at the end showing you the ideal weight for that height and gender.

Deliverable 2). def main():

MIN\_HEIGHT = 60

MAX\_HEIGHT = 170

height = 0

height = int(input("What is your height in inches?: ")) #input

if height < MIN\_HEIGHT:

print("We could not calculate the perfect weight for your height.")

main()

elif height > MAX\_HEIGHT:

print("Please enter an appropriate height, in inches.: ")

main()

else:

maleEntries = ["m", "M", "male", "Male"]

femaleEntries = ["f", "F", "female", "Female"]

gender = input("Are you a male or female? ") #input

while gender not in maleEntries and gender not in femaleEntries:

print("You have entered an invalid response. Please try again.")

gender = input("Are you a male or female? ")

if gender in maleEntries:

convert = getMale(height)

print ("Your ideal weight is ", convert, "pounds")

elif gender in femaleEntries:

convert = getFemale(height)

print ("Your ideal weight is ", convert, "pounds")

else:

print("Invalid entry.")

again = input("Do you have another weight to input? y or n: ") #input

yea = ["y", "yes", "Y", "Yes"]

if again in yea:

main()

else:

print("end.")

def getMale(userHeight):

MIN\_HEIGHT = 60 #min height

BASE\_MALE = 56.2

MALE\_CONVERSION\_FACTOR = 1.41

calcMale = BASE\_MALE + MALE\_CONVERSION\_FACTOR \* (userHeight - MIN\_HEIGHT) #calculation

maleConversion = calcMale \* 2.205

return round(maleConversion)

def getFemale(userHeight):

MIN\_HEIGHT = 60

BASE\_FEMALE = 53.1

FEMALE\_CONVERSION\_FACTOR = 1.36

calcFemale = BASE\_FEMALE + FEMALE\_CONVERSION\_FACTOR \* (userHeight - MIN\_HEIGHT) #calculation

femaleConversion = calcFemale \* 2.205

return round(femaleConversion)

print("This program is designed to give you the ideal weight of a person over 5 feet.")

main()

Deliverable 3).

The context behind choosing this topic as my python project idea was mainly because of the fact that I’m in a nutrition class and this was always a sort of question that I wondered all the time, is like “what would be the correct weight for me right now” , so having something like some code that can just take your height and gender , do a little bit of calculations and simply give a result makes it really easy for people who don’t know their ideal weight, to hop on and just use it seamlessly.

I would say the most challenging part of the code was designing it to be simple and very easy to use without giving out too much information and making sure that every submission to the inputs are able to be resubmitted if something is typed incorrectly or not a valid response to the question being asked. When I originally thought of the project idea, I thought I would be able to do this all within 2 functions and midway through typing up the project I realized I have to use 3 functions that include the main and the male and female conversions. If I had additional time to work on the project , I think I would like to take the project further as in asking more questions and maybe turning it into a project that can recommend certain things based on your current weight and how to get to your ideal weight for your height as fast and as healthy as possible. If I can do this project again, I would hope to do it a little more ahead of the time before the due date to be able to add a lot more quality parts to the code and make it more user friendly and appealing to use.