

CSE 335- Spring 2020

Lab I, 20 Points

Due: Thursday January 30th 11:59 pm

Part I

Note: Please see the video that explains lab I configuration instruction before you attempt this lab.

Design and Implement an iPhone app that

- a) Read the height and waist of a person in inches. Then read the gender (M or F). Assume that the age range is between 20 – 39.

- b) Calculate the RFM (relative fat mass) using following equation:

<https://www.bbdnutrition.com/2018/08/28/an-accurate-new-estimator-of-whole-body-fat-percentage/>

RFM - Relative Fat Mass (RFM): $64 - (20 \times (\text{height}/\text{waist})) + (12 \times \text{gender})$, where gender = 0 for men and 1 for women.

For example,

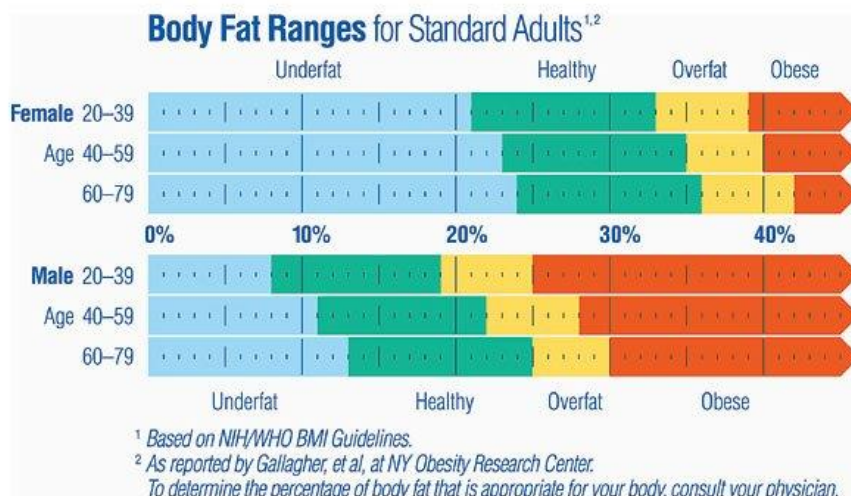
EXAMPLE 1: Female, aged 60, Ht:5'3", WC: 33"

RFM: $64 - (20 \times (63/34)) + (12 \times 1) = 38.9$

EXAMPLE 2: Female, aged 50, Ht:5'4", WC: 30"

RFM: $64 - (20 \times (64/30)) + (12 \times 1) = 33.4$

RFM value is interpreted as follows.

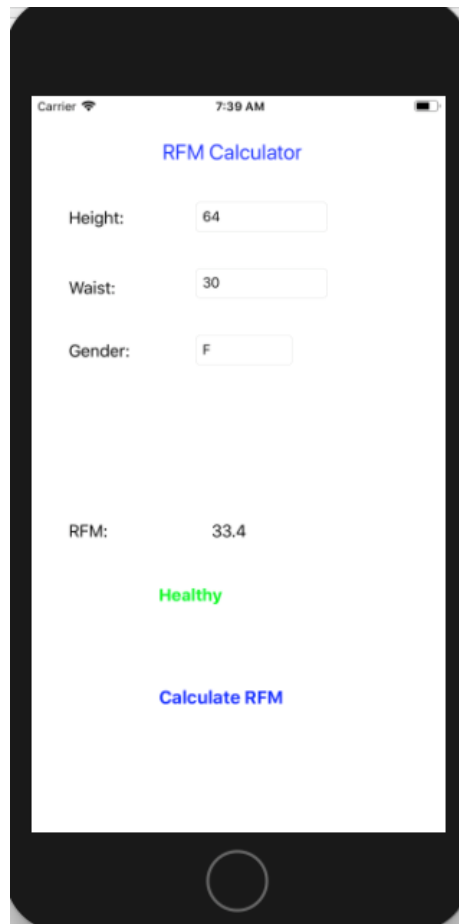


Source: <https://www.bbdnutrition.com/2018/08/28/an-accurate-new-estimator-of-whole-body-fat-percentage/>

- c) Then, display the following messages to the user based on the RFM value

You are Underfat - Blue Color
You are Healthy - Green Color
You are Overfat – Yellow Color
You are Obese - Red color

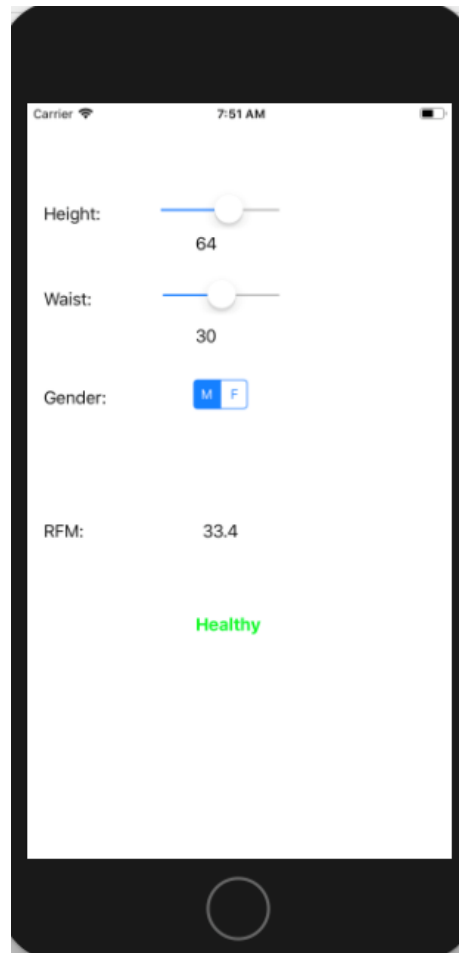
Output of the App should look like follows



Part II

For this part also we calculate RFM slightly differently as follows. Rather than user typing the height and weight in text fields, we use a slider to represent the height and waist and stepper to get the gender value. As slider values changes, it calculates FRM and display the appropriate message.

Output of the App should look like follows



Submission Instructions

Submit both part I and II online to the canvas using the link given under Lab I.