

CMPS 251 Tutorial 7 – Fall 2019

Building MVC-based Apps using JavaFX Binding

Exercise 1 – BMI Calculator App

Create a BMI (Body Mass Index) Calculator App that allows users to enter their weight and height and whether they are entering these values in English or Metric units, then calculates and displays the user's body mass index. The formulas for calculating the BMI:

$$BMI = \frac{weightInPounds \times 703}{heightInInches \times heightInInches}$$

or

$$BMI = \frac{weightInKilograms}{heightInMeters \times heightInMeters}$$

The app should also display the necessary information from the National Institutes of Health so that users can evaluate their BMIs as shown in the UI design below:

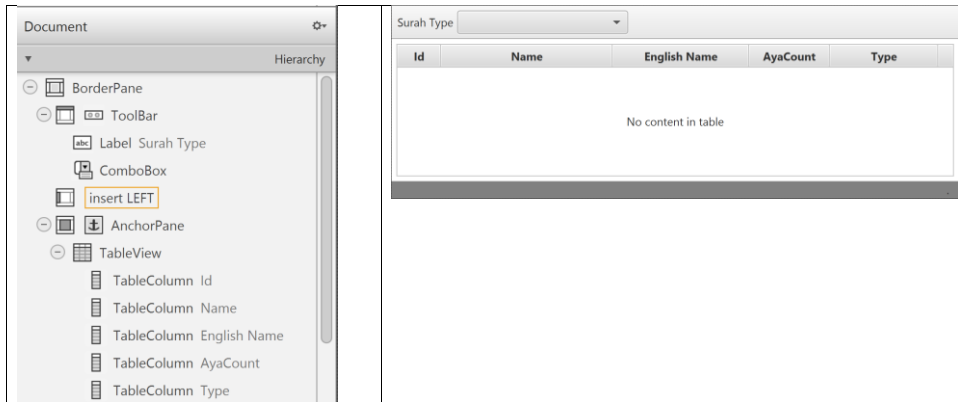
The UI design shows a window with a title bar. Inside, there are two input fields for 'Weight' and 'Height', each with a numeric keypad on the left. Below these is a radio button group for 'English' (selected) and 'Metric'. A 'Calculate' button is centered below the radio buttons. Below the button is a 'BMI' label and a large text area displaying 'BMI VALUES' and their ranges: Underweight: less than 18.5, Normal: between 18.5 and 24.9, Overweight: between 25 and 29.9, and Obese: 30 or greater. The window has a standard Mac OS X title bar with red, yellow, and green buttons.

Exercise 2 – Surah App

Create **Surah App** that allows the user to get the Surahs by type. The app UI is shown below.

Components Tree	UI Design
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Commented [AE1]: Make the solution in the initial folder available to students.



- When the view is loaded fill the surahTypeCombo with the types returned by `SurahRepository.getSurahTypes();`
- When the user selects different surah type then refresh the surah table with the surah returned by `SurahRepository.getSurahs(selectedType);`
- Test as you make progress. The complete UI should look as shown below:

