Machine Problem 3

GUI Converter:

Write a program that converts miles and kilometers, Celsius and Fahrenheit, or pounds and kilograms. You should have one radio button group, and two text fields in your program. The radio button controls the type of conversion. For example, if you choose “miles and kilometers” from the radio button group, the labels of the text fields should display “Mile” and “Kilometer”. If you enter a value in the “Mile” text field and press the “Enter” key, the corresponding kilometer measurement is displayed in the “Kilometer” text field. Likewise, if you enter a value in the “Kilometer” text field and press the “Enter” key, the corresponding miles is displayed in the “Mile” text field. The result should be round to 2 digits after the decimal point.

Formula used:

(0**°C** × 9/5) + 32 = 32**°F**

$m_{(kg)} = m_{(lb)} \times 0.45359237$

$d_{(km)} = d_{(mi)} \times 1.609344$

Random Cards:

Write a program that lets the user click a “Refresh” button to deal four cards randomly selected from a deck of 52 cards. The dealt cards should be face down at first. Only when you click on a card it will turn face up and reveal the value. The card image files are named 1.png, 2.png, . . . , 52.png and stored in the image/card directory. All four cards should be distinct and selected randomly.

Hockey Stats Bar Chart:

mp3_hockey_stats contains a list of NHL teams and their goals in the 2018-19 season. Write a program to read in the data from the file and display the number of goals for each team using a horizontal bar chart. The length of the bar should correspond to the number of goals. Scale the length proportionally so the bar chart fits on the screen. The bar should be automatically resized when the window is resized. You bar chart should look something like this: