You will write a program to convert degrees Fahrenheit (F) to degrees Celsius (C) and vice versa. All variables of temperature should be of type double.

Use the formulas below to perform the conversions:
\[ C = \frac{F - 32.0}{1.8} \] to convert a Fahrenheit to Celsius
\[ F = C \times 1.8 + 32.0 \] to convert a Celsius to Fahrenheit

**Requirements**

- Use a Switch-Case to provide a menu option to select which conversion formula to use. Your program will take this option (Hint: integer type) and then move on to relevant case statement for the conversion formula.
- Next, your program will take a double input from the user, to be evaluated with the program.
- Follow formatting as demonstrated in the "Sample Output" below. Your temperature values should be formatted to 2 leading digits and 2 decimal places (Hint: use printf for correct formatting).
- Make sure you have your name and Bronco ID in the header comment
```c
/*     Name: Jane-Joe
    *      Bronco ID: 12345678
    *      Sources of Help: Jon Doe helped me with.........
    */
```

Your output should look exactly like this. Highlighted values are the user input.

**HW2: Temperature Conversions**

Enter option 1. Converting Fahrenheit to Celsius
Enter option 2. Converting Celsius to Fahrenheit

Enter option number: 1
Converting Fahrenheit to Celsius
Enter temperature to convert from Fahrenheit: 98.60
98.60 degrees F = 37.00 degrees C

Enter option number: 2
Converting Celsius to Fahrenheit
Enter temperature to convert from Celsius: 100.00
100.00 degrees C = 212.00 degrees F

Enter option number: 8
Incorrect option, please enter 1 to convert from Fahrenheit to Celsius, or 2 to Convert from Celsius to Fahrenheit!

**Due:** October 18, 2017 by 6.00 PM. submit your Temperature.java file to Blackboard.

**Total Points = 100**

- Code complies to requirements: 70 points
- Good coding style: 20 points
- Correctness/Robustness: 10 points