~\Downloads\Lab4.java

```
/*  Source : LAB4.CPP

   Action  : Program will display a menu and have user enter a choice,
             will continue to loop or repeat until user decides to quit.
             Menu choices are as follows:

             First choice:
               Program ask user to enter Fahrenheit temperature then
               calculates and displays the Celsius equavilent temperature.

             Second choice:
               Program ask user to enter radius of a circle then displays
               the area of circle.

             Third choice:
               Program ask user to enter any character from the keyboard
               and then tells whether entered key is a lower case letter,
               an upper case letter or no letter at all.

             Final choice:
               Program will quit when user enters a 'Q' or 'q'.


  ** NOTES **
      You need to fill in the missing code to get the program to work as
      describe above.

      Do not change any of the code with the do-while loop, and do not
      change any of the existing code, just add what you need to get it to
      work.  You may add more variables if you want to.

      Also note that this program will not compile the way it is now,
      you must add the correct code first, then compile it.

-------------------------------------------------------------------------*/
/*
Name: Hunter Poole
Date: 2/20/25
Lab #: 4
Source File Name: Lab4.java
Action: As commented above
*/

package testlab;

import java.util.*;

```

```
48 public class Lab4
49 {
50   public static void main(String[] args)
51    {
52      final float PI = 3.14f;
53      float Fahrenheit, Radius, Celsius, Area;
54      char Response, Ch;
55      Scanner Input = new Scanner(System.in);
56
57      do
58       {
59         System.out.print("\nChoose one of the following:\n");
60         System.out.println("  1) convert Fahrenheit to Celsius");
61         System.out.println("  2) calculate area of a circle");
62         System.out.println("  3) Enter a character to see if upper or lower case or other");
63         System.out.println("  Q) Quit");
64         System.out.print("Response --> ");
65         Response = Input.next().charAt(0);
66
67         if (Response == '1')
68          {
69           System.out.printf("%n%s","Provide your Fahrenheit temperature: ");
70           Fahrenheit = Input.nextFloat();
71
72           Celsius = (Fahrenheit - 32.00f) * (5f/9f);
73
74           System.out.printf("%.2f %s %.2f %s %n", Fahrenheit, "degrees Fahrenheit is equal
   to", Celsius, "degrees Celsius");
75          }
76         else if (Response == '2')
77          {
78              System.out.printf("%n%s","Provide the radius of the circle: ");
79              Radius = Input.nextFloat();
80
81              Area = PI * (Radius * Radius);
82
83              System.out.printf("%s %.2f %s %n", "The area of the circle is:", Area, "units
   squared");
84          }
85         else if (Response == '3')
86          {
87            System.out.printf("%n%s","Provide your character: ");
88            Ch = Input.next().charAt(0);
89
90            if (Ch >= 'A' && Ch <= 'Z')
91            {
92                System.out.println("Character is upper case");
93            }
94            else if (Ch >= 'a' && Ch <= 'z')
```

```
            {
                System.out.println("Character is lower case");
            }
            else
            {
                System.out.println("Character is neither upper or lower case");
            }
         }

        else if (Response != 'Q' && Response != 'q')  // DO NOT change any code in these
              System.out.println("ILLEGAL INPUT, pick again\n\n");  //two lines or below
     }
    while (Response != 'Q' && Response != 'q');
   }
}

/*

//\\//\\One known positive to positive celsius conversion, one known + -> - conversion//\\//\
\

Choose one of the following:
  1) convert Fahrenheit to Celsius
  2) calculate area of a circle
  3) Enter a character to see if upper or lower case or other
  Q) Quit
Response --> 1

Provide your Fahrenheit temperature: 56.495
56.49 degrees Fahrenheit is equal to 13.61 degrees Celsius

Choose one of the following:
  1) convert Fahrenheit to Celsius
  2) calculate area of a circle
  3) Enter a character to see if upper or lower case or other
  Q) Quit
Response --> 1

Provide your Fahrenheit temperature: 16
16.00 degrees Fahrenheit is equal to -8.89 degrees Celsius

//\\//\\Two radii//\\//\\

Choose one of the following:
  1) convert Fahrenheit to Celsius
  2) calculate area of a circle
  3) Enter a character to see if upper or lower case or other
  Q) Quit
Response --> 2
```

```
143
144 Provide the radius of the circle: 6.755
145 The area of the circle is: 143.28 units squared
146
147 Choose one of the following:
148   1) convert Fahrenheit to Celsius
149   2) calculate area of a circle
150   3) Enter a character to see if upper or lower case or other
151   Q) Quit
152 Response --> 2
153
154 Provide the radius of the circle: 14
155 The area of the circle is: 615.44 units squared
156
157 //\\//\\Two of each character type//\\//\\
158
159 Choose one of the following:
160   1) convert Fahrenheit to Celsius
161   2) calculate area of a circle
162   3) Enter a character to see if upper or lower case or other
163   Q) Quit
164 Response --> 3
165
166 Provide your character: T
167 Character is upper case
168
169 Choose one of the following:
170   1) convert Fahrenheit to Celsius
171   2) calculate area of a circle
172   3) Enter a character to see if upper or lower case or other
173   Q) Quit
174 Response --> 3
175
176 Provide your character: X
177 Character is upper case
178
179 Choose one of the following:
180   1) convert Fahrenheit to Celsius
181   2) calculate area of a circle
182   3) Enter a character to see if upper or lower case or other
183   Q) Quit
184 Response --> 3
185
186 Provide your character: e
187 Character is lower case
188
189 Choose one of the following:
190   1) convert Fahrenheit to Celsius
191   2) calculate area of a circle
```

```
  3) Enter a character to see if upper or lower case or other
  Q) Quit
Response --> 3

Provide your character: z
Character is lower case

Choose one of the following:
  1) convert Fahrenheit to Celsius
  2) calculate area of a circle
  3) Enter a character to see if upper or lower case or other
  Q) Quit
Response --> 3

Provide your character: %
Character is neither upper or lower case

Choose one of the following:
  1) convert Fahrenheit to Celsius
  2) calculate area of a circle
  3) Enter a character to see if upper or lower case or other
  Q) Quit
Response --> 3

Provide your character: ""
Character is neither upper or lower case

//\\//\\QUIT//\\//\\

Choose one of the following:
  1) convert Fahrenheit to Celsius
  2) calculate area of a circle
  3) Enter a character to see if upper or lower case or other
  Q) Quit
Response --> q
 */
```