CMPINF 0401 Intermediate Programming
Tuesday, May 21, 2024
In class Exercise

Earlier this term we talked about using expressions to round a number to 2 decimal places. The code (taken from ex3.java) is as follows:

```
double round2DigitD = (int) (value * 100 + 0.5) / 100.0;
```

where value is the original number that we are trying to round. This expression works but it clearly is specific to 2 decimal places. Now that we have discussed methods and writing functions we would like to create a rounding function that can round to an arbitrary number of decimal places. In particular we will implement the method below:

```
public static double round(double orig, int places)
```

This method should accept arguments *orig* of type **double** and *places* of type **int** and return the result of *orig* rounded to *places* decimal places.

In implementing this method you cannot use any predefined Java functions – so you must determine how to utilize the arguments passed in while calculating the correct values needed to round the number appropriately.

The main program to test this method is already provided in file InClass1.java. The method is provided without a body. You need to complete the body of the method.

Once you have completed the method test it with various inputs. Some sample runs are shown in file InClass1-out.txt.

This exercise is not for credit but it will be very helpful to you if you are able to complete it. After some time of independent work during lecture we will finish the exercise together.