Task

1. To develop a utility/ application, which can import 1 or multiple CSV files
   - Multiple CSV files with data in columns,
   - 3rd column date & time,
   - 4th column temperature
   - CSV file name has S.N. (which also need to be exported)

Screenshot CSV files contents:

#	Elapsed	Time (mm/dd/yyyy)	Int.T°C
1	0:00:00	4/19/2017 15:27	22.4
2	0:01:00	4/19/2017 15:28	22.6
3	0:02:00	4/19/2017 15:29	22.7
4	0:03:00	4/19/2017 15:30	22.7

2. The utility will also have option to import reference file in TXT format

Screenshot Reference file format:

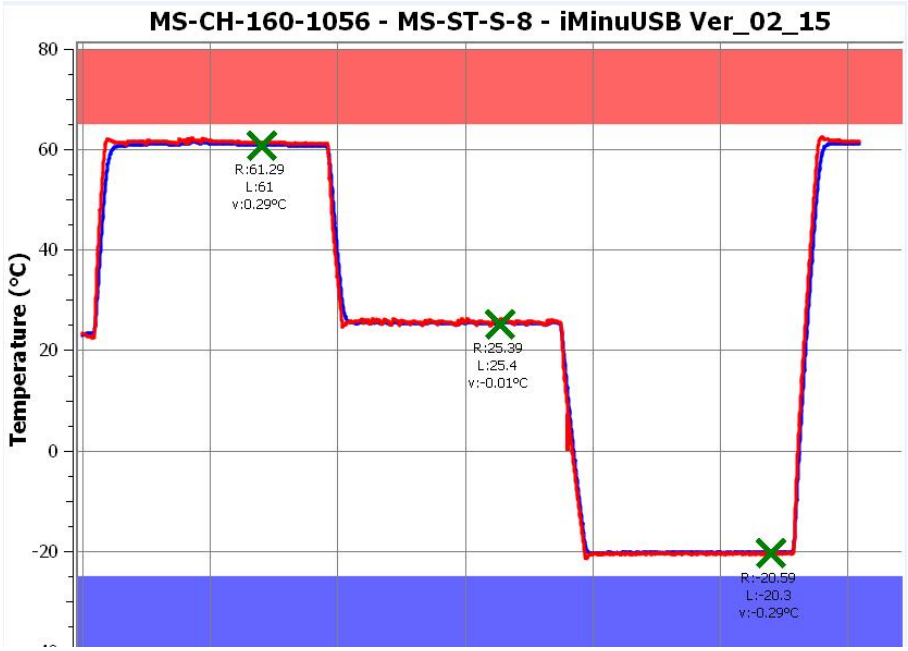
Date	Time	Reading
6/5/2017	3:22:19 PM	23.388 °C
6/5/2017	3:22:30 PM	23.388 °C

3. The utility will analyze multiple CSV files by comparting with reference data to generate
4. Both CSV and reference data is usually 3 points temperature data, ~ +60C, +25C and -20C
5. Utility will pick up the closest point of each point (one for each point +60C, +25C and -20C) of reference and CSV
6. Date /time of reference and CSV file can be ignored or have an option 'if want to use'
7. Here is screenshot for better understanding. Where blue line is CSV data and red line is reference data. green cross marks are the closest points picked

This is how in background it will compare the data,

Each CSV file will be compared with reference individually

If data and time of both files are compared, report that (optional)



8. Conditions:
   +60 & +25C has the ±0.32C tolerance
   -20C has ±0.51C tolerance

Utility screenshot (sample)

9. Now these points will be exported in final excel /CSV file as output, where the columns will be

S. N.	Ref60	Log60	Variance	Ref25	Log25	Variance 25	Ref -20	Log -20	Variance -20

Variance = Ref temp at 1 point – logger temp (CSV) at same point (keeping conditions in #8 in accordance)