

# Application testing

No.	Description/Condition Tested	Test Data/Values	Expected Output	Passed (Y/N)	Comments
1	Input not 1 to 6	7	Error message	Y	Gets into endless loop with char input
2	1st menu option	1	1st option runs	Y	Correct option runs on 1-5 input
3	Write output to file	4	Outputs to file	Y	Success or failure message shown
4	Exit the program	6	Menu closes	Y	

## 1) Menu

```
Reading file data...
Metdata-Jan-Dec2007.csv
Metdata-Jan-Dec2008.csv
Metdata-Jan-Dec2009.csv
MetData_Jan01-2010-Jan01-2011-ALL.csv
MetData_Jan01-2011-Jan01-2012-ALL.csv
MetData_Jan01-2012-Jan01-2013-ALL.csv
MetData_Jan01-2013-Jan01-2014-ALL.csv
MetData_Mar01-2014-Mar01-2015-ALL.csv
MetData_Mar01-2015-Mar01-2016-ALL.csv
Metdata-Jan-Dec2016.csv

Menu:

1.    The average wind speed and average ambient air temperature for a specified month and year
2.    Average wind speed and average ambient air temperature for each month of a specified year
3.    Total solar radiation in kWh/m2 for each month of a specified year
4.    Average wind speed (km/h), average ambient air temperature and total solar radiation in kWh/m2
      for each month of a specified year
5.    Highest solar radiation for the given date
6.    Exit

Enter your choice:
```

## 2) Menu option 1

```
Enter your choice: 1
Enter Year:
2009
Enter Month:
5
May 2009: 18.13 km/h, 16.52 degrees C
```

## 3) Menu option 2

```
Enter your choice: 2
Enter Year:
2010
January: 23.17 km/h, 25.24 degrees C
February: 21.50 km/h, 23.86 degrees C
March: 20.60 km/h, 22.92 degrees C
April: 16.56 km/h, 18.39 degrees C
May: 13.84 km/h, 14.64 degrees C
June: 13.54 km/h, 12.68 degrees C
July: 14.12 km/h, 11.70 degrees C
August: 13.10 km/h, 12.51 degrees C
September: 18.41 km/h, 14.88 degrees C
October: 20.06 km/h, 17.08 degrees C
November: 21.90 km/h, 21.87 degrees C
December: 24.71 km/h, 22.28 degrees C
```

## 4) Menu option 3

```
Enter your choice: 3
Enter Year:
2014
January: 1.32 kWh/m^2
February: No Data for this Month!
March: 183.49 kWh/m^2
April: 137.42 kWh/m^2
May: 86.34 kWh/m^2
June: 79.45 kWh/m^2
July: 84.07 kWh/m^2
August: 112.31 kWh/m^2
September: 144.99 kWh/m^2
October: 200.61 kWh/m^2
November: 220.06 kWh/m^2
December: 268.57 kWh/m^2
```

### 5) Menu option 4:

```
Enter your choice: 4
Enter Year:
2013
Data successfully written to the file!
```

	A	B	C	D
1	2013			
2	January: 22.93 km/h	24.36 degrees C	246.84 kWh/m <sup>2</sup>	
3	February: 21.26 km/h	25.45 degrees C	213.64 kWh/m <sup>2</sup>	
4	March: 19.35 km/h	21.24 degrees C	185.29 kWh/m <sup>2</sup>	
5	April: 12.16 km/h	21.20 degrees C	118.69 kWh/m <sup>2</sup>	
6	May: 15.09 km/h	15.49 degrees C	103.45 kWh/m <sup>2</sup>	
7	June: 13.50 km/h	13.62 degrees C	87.77 kWh/m <sup>2</sup>	
8	July: 15.20 km/h	12.38 degrees C	87.31 kWh/m <sup>2</sup>	
9	August: 17.55 km/h	15.15 degrees C	109.31 kWh/m <sup>2</sup>	
10	September: 22.49 km/h	15.27 degrees C	130.42 kWh/m <sup>2</sup>	
11	October: 17.20 km/h	17.23 degrees C	201.42 kWh/m <sup>2</sup>	
12	November: 23.38 km/h	21.61 degrees C	233.12 kWh/m <sup>2</sup>	
13	December: 19.44 km/h	22.56 degrees C	270.52 kWh/m <sup>2</sup>	
14				

### 6) Menu option 5:

```
Enter your choice: 5
Enter Year:
2015
Enter Month:
3
Enter Day:
1
Date: 1/3/2015
Highest solar radiation for the day: 997 W/m2
Time:
15:10
```