Test plan

dateType class

Test case No.	Test case	Input	Output	Pass/Fail
1	Default constructor: dateType( )	date( )	1/1/1999	Pass
2	Constructor: dateType(int d, int m, int y)	date1(1, 1, 2020)	1/1/2020	Pass
3	Getter: getDay( )	date1.getDay( )	1	Pass
4	Getter: getMonth( )	date1.getMonth( )	1	Pass
5	Getter: getYear( )	date1.getYear( )	2020	Pass
6	Setter: setDay(int d)	date2.setDay(14)	14	Pass
7	Setter: setMonth(int m)	date2.setMonth(4)	4	Pass
8	Setter: setYear(int y)	date2.setYear(2022)	2022	Pass
9	Setter: setDateType(int d, int m, int y)	date3.setDateType(2, 1, 2000)	2/1/2000	Pass
10	print( )	date3.print( )	Date: 2/1/2000	Pass

timeType class

Test case No.	Test case	Input	Output	Pass/Fail
1	Default constructor: timeType( )	time( )	23:59:59	Pass
2	Constructor: timeType(int h, int m, int s)	time1(22, 59, 59)	22:59:59	Pass
3	Getter: getHour( )	time1.getHour( )	22	Pass
4	Getter: getMinute( )	time1.getMinute( )	59	Pass
5	Getter: getSecond( )	time1.getSecond( )	59	Pass
6	Setter: setHour(int h)	time2.setHour(1)	1	Pass
7	Setter: setMinute(int m)	date2.setMinute(1)	1	Pass
8	Setter: setSecond(int s)	date2.setSecond(1)	1	Pass
9	Setter: setTimeType(int h, int m, int s)	time3.setTimeType(2, 1, 59)	2:1:59	Pass
10	print( )	time3.print( )	Time: 2:1:59	Pass

airQualityType class

Test case No.	Test case	Input	Output	Pass/Fail
1	Default constructor: airQualityType( )	airQuality( )	1/1/1999, 23:59:59, 0 0, 0	Pass
2	Constructor: airQualityType(dateType d, timeType t, double temp, double relativeHumid, double absHumid)	airQuality1(date1, time1, 31.0, 1.0, 0.7357)	1/1/2020, 22:59:59, 31, 1, 0.7357	Pass
3	Getter: getDate( )	airQuality1.getDate( )	1/1/2020	Pass
4	Getter: getTime( )	airQuality1.getTime( )	22:59:59	Pass
5	Getter: getTemp( )	airQuality1.getTemp( )	31	Pass
6	Getter: getRelativeHumidity( )	airQuality1.getRelativeHumidity( )	1	Pass
7	Getter: getAbsoluteHumidity( )	airQuality1.getAbsoluteHumidity( )	0.7357	Pass
8	Setter: setDate(dateType d)	airQuality2.setDate(date2)	14/4/2022	Pass
9	Setter: setTime(timeType t)	airQuality2.setTime(time2)	1:1:1	Pass
10	Setter: setTemp(double temp)	airQuality2.setTemp (35.0)	35	Pass
11	Setter: setRelativeHumidity(double relativeHumid)	airQuality2.setRelativeHumidity(86.1)	86.1	Pass
12	Setter: SetAbsoluteHumidity(double absHumid)	airQuality2. SetAbsoluteHumidity(0.7951)	0.7951	Pass
13	Setter: setAirQualityType(dateType d, timeType t, double temp, double relativeHumid, double absHumid)	airQuality3.setAirQuality3(date3, time3, 25.0, 65.1, 0.6156)	2/1/2000, 2:1:59, 25, 65.1, 0.6156	Pass

Test case No.	Test case	Input	Output	Pass/Fail
14	print( )	airQuality3.print( )	Date: 2/1/2000 Time: 2:1:59 Temperature: 25 Relative Humidity: 65.1 Absolute Humidity: 0.6156	Pass

main

Test case No.	Test case	Input	Output	Pass/Fail
1	readFile	empty.txt	The file is empty	Pass
2	readFile	Testing.txt	Here is the current number of entries in our database: 42	Pass
3	readFile	Testing.txt q	Exist!	Pass
4	displayAvgTemp	Year: 2004 Month: 3	Average temperature for Month 3 is 10.43 Degrees Celsius	Pass
5	displayAvgRelativeHumidity	Year: 2004 Month: 4	Average Relative Humidity for Month 4 is 53.10%	Pass
6	displayAvgAbsoluteHumidity	Year: 2004 Month: 5	Average Absolute Humidity for Month 5 is 1.22	Pass
7	displayInformationOnDay	Year: 2004 Month: 8 Day: 21 Hour: 0 Minute: 00 Second: 00	Temperature: 26.70 Relative Humidity: 46.70	Pass
8	displayHighestTemp	Year: 2004 Month: 7	Highest Temperature for Month 7 is 34.00 Degrees Celsius	Pass
9	displayHighestRelativeHumidity	Year: 2004 Month: 8	Highest Relative Humidity for Month 8 is 47.30%	Pass
10	displayHighestAbsoluteHumidity	Year: 2004 Month: 9	Highest Absolute Humidity for Month 9 is 1.11	Pass
11	displayHigherThanAvgTemperature	Year: 2004 Month: 10	Average temperature for Month 10 is 20.90 Degrees Celsius. The dates and times for a month when the temperature is higher than the average temperature: Date: 2/10/2004 Time: 9:0:0	Pass
12	displayHigherThanAvgRelativeHumidity	Year: 2005 Month: 1	Average Relative Humidity for Month 1 is 60.83% The dates and times for a month when the relative humidity is higher than the average relative humidity: Date: 19/1/2005 Time: 7:0:0	Pass

13	displayHigherThanAvgAbsoluteHumidity	Year: 2005 Month: 2	Average Absolute Humidity for Month 2 is 0.52 The dates and times for a month when the absolute humidity is higher than the average absolute humidity: Date: 25/2/2005 Time: 5:0:0	Pass
14	checkMonth	Year: 2005 Month: 12	Please enter valid month	Pass
15	checkDate	year: 2005 month: 4 Day: 31	Date not found	Pass
16	checkTime	year: 2005 month: 2 Day: 1 Hour: 7 minute: 00 Second: 00	Time not found	Pass