Data Collector Web Service

A web service to allow AirQWeb's users to collect their data from cloud database in JSON format.

Some examples of how the AirQWeb's cloud database can be queried are provided below (It is recommended to use HTTPS to make sure the data is encrypted between client and server).

1. Get list of instruments for an AirQWeb account

To get the list of instruments registered in a particular AirQWeb account, please pass the following parameters in the URL,

- Username: User ID for the account
- Password: Password for the account
- Option: Option for list of instruments i.e. 'instrumentList'

GET request via a browser:

https://www.airqweb.com/dataCollectorService/index.php?username=username&password=Password&option=instrumentList

Output:


```
[
	{
		"instrumentID":"TNO1234",
		"name":"Osiris",
		"location":"Turnkey Head Office",
		"city":"Northwich",
		"country":"United Kingdom",
		"latitude":"53.244780",
		"longitude":"-2.479382"
	},
	{
		"instrumentID":"TNO9876",
		"name":"Topas",
		"location":"Turnkey Head Office",
		"city":"Northwich",
		"country":"United Kingdom",
		"latitude":"53.244780",
		"longitude":"-2.479382"
	}
]
```


Following is the sample Java code,

```
try{
    String urlStr =
"https://www.airqweb.com/dataCollectorService/index.php?username=username&password=Password&option
=instrumentList";
    URL url = new URL(urlStr);
        URLConnection conn = url.openConnection();
    BufferedReader in = new BufferedReader(new InputStreamReader(conn.getInputStream()));
    //Handle the data however you want
    System.out.println(in.readLine());
}catch (MalformedURLException e){
    e.printStackTrace();
}catch (IOException e){
    e.printStackTrace();
}
```

2. Get latest data from an instrument

To get the latest data from an instrument, pass the following parameters in the URL,

- Username: User ID for the account
- Password: Password for the account
- InstrumentID: ID of the Instrument
- Option: Option for latest data i.e. 'latestData'

GET request via a browser:

https://www.airqweb.com/dataCollectorService/index.php?username=username&password=Password&instrumentID=TNO1234&option=latestData

Output:


```
[
    {
            "location":"Sensor location",
            "coordinates":"53.38919,-2.615622",
            "dateTime":"2014-01-01 00:00:00",
            "pollutants":"Channel1,Channel2,Channel3,Channel4,Channel5,Channel6,Channel7,Channel8",
            "values":"value1,value2,value3,value4,value5,value6,value7,value8",
            "units":"unit1,unit2,unit3,unit4,unit5,unit6,unit7,unit8"
    }
]
```


3. Get data from an instrument between a date range

To get the data from an instrument between a date range, pass the following parameters in the URL,

- Username: User ID for the account
- Password: Password for the account
- InstrumentID: ID of the Instrument
- DateFrom: From date (must be in yyyy-MM-dd HH:mm:ss format)
- DateTo: To date (must be in yyyy-MM-dd HH:mm:ss format)

GET request via a browser:

https://www.airqweb.com/dataCollectorService/index.php?username=username&password=Password&instrumentID=TNO1234&dateFrom=2014-01-01 00:00:00&dateTo=2014-01-01 23:53:00

Output:


```
[
    {
            "location":"Trial 2",
            "coordinates":"53.38919,-2.615622",
            "dateTime":"2014-01-01 00:00:00",
            "pollutants":"Channel1,Channel2,Channel3,Channel4,Channel5,Channel6,Channel7,Channel8",
            "values":"value1,value2,value3,value4,value5,value6,value7,value8",
            "units":"unit1,unit2,unit3,unit4,unit5,unit6,unit7,unit8"
    },
    {
            "location":"Trial 2",
            "coordinates":"53.38919,-2.615622",
            "dateTime":"2014-01-01 00:05:00",
            "pollutants":"Channel1,Channel2,Channel3,Channel4,Channel5,Channel6,Channel7,Channel8",
            "values":"value1,value2,value3,value4,value5,value6,value7,value8",
            "units":"unit1,unit2,unit3,unit4,unit5,unit6,unit7,unit8"
    }
]
```