**Database Schema**

Started: 7/24/2020

Current: 7/27/2020

Use Nlog instead of ActivityLog table

**~~Source:~~**

~~Code~~

|  |  |  |
| --- | --- | --- |
| **~~ActivityLog~~** |  |  |
| ~~Model/DB FieldName~~ | ~~Type~~ | ~~Notes~~ |
| ~~ID~~ | ~~Int, AutoIncrement~~ |  |
| ~~Source~~ | ~~Text~~ |  |
| ~~Activity~~ | ~~Int~~ |  |
| ~~LogLevel~~ | ~~Int, enum~~ |  |
| ~~TimeStamp~~ | ~~DateTime~~ |  |

**Source:**

https://w1.weather.gov/xml/current\_obs/seek.php?state=tx&Find=Find

|  |  |  |  |
| --- | --- | --- | --- |
| **ObservationSites** |  |  |  |
| ModelFieldName | DBFieldName | Type | Notes |
| ID | ID | Int, AutoIncrement |  |
| Office | Office | Text |  |
| State | State | Text |  |
| CallSign | CallSign | Text |  |

**Source:**

https://w1.weather.gov/xml/current\_obs/KAMA.rss

KAMA\_Current\_Conditions.rss

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CurrentConditions** |  |  |  |  |
| ModelFieldName | DBFieldName | Type | Notes | XML Tag |
| ID | ID | Int, AutoIncrement |  |  |
| UGC | UGC | text |  |  |
| FIPS | FIPS | text | Comma Delimited Text |  |
| Location | Location | text |  | location |
| SuggestedPickup | SugPickup | text |  | suggested\_pickup |
| SuggestedPickupPeriod | SugPickupPeriod | int |  | suggested\_pickup\_period |
| StationID | StationID | text |  | station\_id |
| Latitude | Latitude | double |  | latitude |
| Longitude | Longitude | double |  | longitude |
| ObservationTime | ObsTime | DateTime |  | observation\_time\_rfc822 |
| Weather | Weather | text |  | weather |
| TempF | TempF | decimal |  | temp\_f |
| RelativeHumidity | RelHumidity | Decimal |  | relative\_humidity |
| WindDir | WindDir | text |  | wind\_dir |
| WindDegrees | WindDegrees | int |  | wind\_degrees |
| WindMPH | WindMPH | decimal |  | wind\_mph |
| PressureInches | PressureIn | decimal |  | pressure\_in |
| DewPointF | DewPointF | decimal |  | dewpoint\_f |
| VisibilityMiles | VisibleMiles | decimal |  | visibility\_mi |

**Source:**

https://en.wikipedia.org/wiki/List\_of\_National\_Weather\_Service\_Weather\_Forecast\_Offices

|  |  |  |  |
| --- | --- | --- | --- |
| **ForecastOffices** |  |  |  |
| ModelFieldName | DBFieldName | Type | Notes |
| ID | ID | Int, AutoIncrement |  |
| Office | Office | Text |  |
| State | State | Text |  |
| CallSign | CallSign | Text |  |

**Source:**

https://forecast.weather.gov/MapClick.php?lat=35.2026&lon=-101.819&unit=0&lg=english&FcstType=dwml

Forecast.xml

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Forecasts** |  |  |  |  |
| ModelFieldName | DBFieldName | Type | Notes | XML Tag |
| ID | ID | Int, AutoIncrement |  |  |
| UGC | UGC | text |  |  |
| DailyMinTemp | ForecastDetailsID | int | Array of Values to ForecastDetails | temperature type="minimum" units="Fahrenheit"/value |
| DailyMaxTemp | ForecastDetailsID | int | Array of Values to ForecastDetails | temperature type="maximum" units="Fahrenheit"/value |
| HourlyProbPrecip | ForecastDetailsID | int | Array of Values to ForecastDetails | probability-of-precipitation type="12 hour" units="percent"/value |
| WeatherType | ForecastTextID | int | Array of Values to ForecastText | weather/weather-conditions |
| Forecast | ForecastTextID | int | Array of Values to ForecastText | wordedForecast/text |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ForecastDetails** |  |  |  |  |
| ModelFieldName | DBFieldName | Type | Notes | XML Tag |
| ID | ID | Int, AutoIncrement |  |  |
| Value | Value | decimal |  |  |
| ForecastID | ForecastID | int | ForecastID |  |

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| --- | --- | --- | --- | --- |
| **ForecastText** |  |  |  |  |
| ModelFieldName | DBFieldName | Type | Notes | XML Tag |
| ID | ID | Int, AutoIncrement |  |  |
| Value | Value | text |  |  |
| ForecastID | ForecastID | int | ForecastID |  |

**Source:**

https://www.roc.noaa.gov/WSR88D/Program/NetworkSites.aspx

|  |  |  |  |
| --- | --- | --- | --- |
| **RadarSites** |  |  |  |
| ModelFieldName | DBFieldName | Type | Notes |
| ID | ID | Int, AutoIncrement |  |
| NexradSystem | Nexrad | Text |  |
| City | City | Text |  |
| State | State | Text |  |
| ICAO | ICAO | Text |  |

**Source:**

Read folder in predictably named pattern

|  |  |  |  |
| --- | --- | --- | --- |
| **RadarFiles** |  |  |  |
| ModelFieldName | DBFieldName | Type | Notes |
| ID | ID | Int, AutoIncrement |  |
| ICAO | ICAO | text |  |
| LayerType | LayerType | Int, enum | Base Reflectivity (out to 124 nm), Composite Reflectivity, Storm Relative Motion, Base Velocity, One-Hour Precipitation, Storm Total Precipitation, Base Reflectivity (out to 248 nm) |
| TimeStamp | TimeStamp | DateTime |  |