Description:

Class Attribute Action Dependency

- An software system that displays a METAR or TAF for a station.
- A user may input an identifier for the station and view the current wx (METAR) or forecast (TAF).
- The user may choose favorite or default stations.
- When no default has been chosen, the app will display a default station
- The output will be textual information or a graphical display based on user preference.
- The system will offer a complication for display on the watch face for a selected station.
- The TAF will contain:
  - unique ICAO site id
  - site name
  - issueTime
  - validTimeFrom
  - validTimeTo
  - validTime
  - timeGroup
  - fcstType
  - windspeed in knots
  - wind direciton
  - visibility
  - ceiling if reported
  - amount of cloud coverage
  - flight category
  - rawTAF
- The METAR will contain the following elements:
  - unique ICAO site id
  - site name
  - observation time
  - Celsius temperature
  - dewpoint
  - windspeed in knots
  - wind direction
  - reported ceiling if any
  - amount of cloud coverage
  - visibility
  - flight category
  - barometric pressure
  - raw text of the report

Requirements:

1. Technical Requirements
   - The system operates on the Apple Watch Hardware using WatchOS3.
   - The system will be written in Swift 3.0 programming language
   - The system will require a internet connection to receive current data.
   - The system will make use public data from http://www.aviationweather.gov returned in JSON format.
   - The system depends upon the Gloss JSON parsing library to parse -- data.
   - The system will use a Swift implementation of the GeoLocation calculations for efficient data queries.
   - The sytem will depend on SiriKit for contextual queries.
   - All Lat/Lon coordinates will be needed for the stations in order to formulate request.

2. Functional Requirements
   - The user will be able to input stations via 'scribble' text input.
   - The user will be able to input stations using dictation.
   - The user can ask for station information by ICAO identifier.
   - The user can ask for station information by airport name / site name.
   - The user can ask Siri for the current weater at a desired station
   - The user can ask Siri for the forecast weather at a desired station
   - The user can ask Siri for the weather forecast for a specific hour at a desired station
   - The user can ask Siri for current weather at more than one station.
   - Inputs will be validated and a message will be returned to the user to alert of an invalid station input.
   - An alert will be displayed when the METAR is more than one hour old.
   - An alert will be displayed when the TAF is expired.
   - The output may be toggled between graphical and textual formats.
   - The altimetry output default may be in inHG or hPA.
   - The visibility output default may be in meters or statue miles.