





### ER Diagram Assumptions

- It is not necessary to have an “Approves” relationship from Administrator to City Official because there is no need to store which specific administrator approved each city official in the database. We have replaced this relationship with an attribute, isApproved, under the “City Official” entity type.
- The “zipcode” attribute of a “POI Location” entity does not need to match the actual physical location of the city it is located in.
- We did not include a “Creates” relationship between “City Scientist” and “Data Point” because we assume there is no need to store which specific city scientist created each of the POI location in the database.
- We did not include a “Flags” relationship between City Official and Data Point because we assume there is no need to store which specific city official flagged each of the data points in the databases that are flagged.
- Each city official can only have one title.
- Each data point can only have one data value.

### Information Flow Diagram Assumptions

- We do not need a document for the screens that appear when a specific user logs in because we are not reading or writing to the database. Examples would be the city scientist screen which pops up upon logging in with the options of adding a new data point or adding a new POI location, the administrator screen which pops up upon logging in with the options to select whether to go to data point or pending city official accounts, the city official screen which pops up upon logging in with the options for filter/search POI and POI Report.

### Logical Constraints

- There is a set of derived attributes of “POI Location” (minimum, maximum, and average) for each entity of the “Data Category” entity type.
- When the “isFlagged” attribute of POI Location is set to “true” by a “City Official” entity, the “date flagged” attribute must store the date on which the city official flagged the the POI Location. Likewise, when the “isFlagged” is set to “False”, the “date flagged” attribute must be reset to “null”.

- A “City Official” can not approve him/herself because only an “Administrator” can approve a City Official.
- Neither a “City Official” or a “City Scientist” can approve a “Data Point” because only an “Administrator” can approve a Data Point.
- Neither a “City Scientist” or an “Administrator” can flag a “POI Location” because only a “City Scientist” can flag a POI Location.