

# AP LAB REPORT

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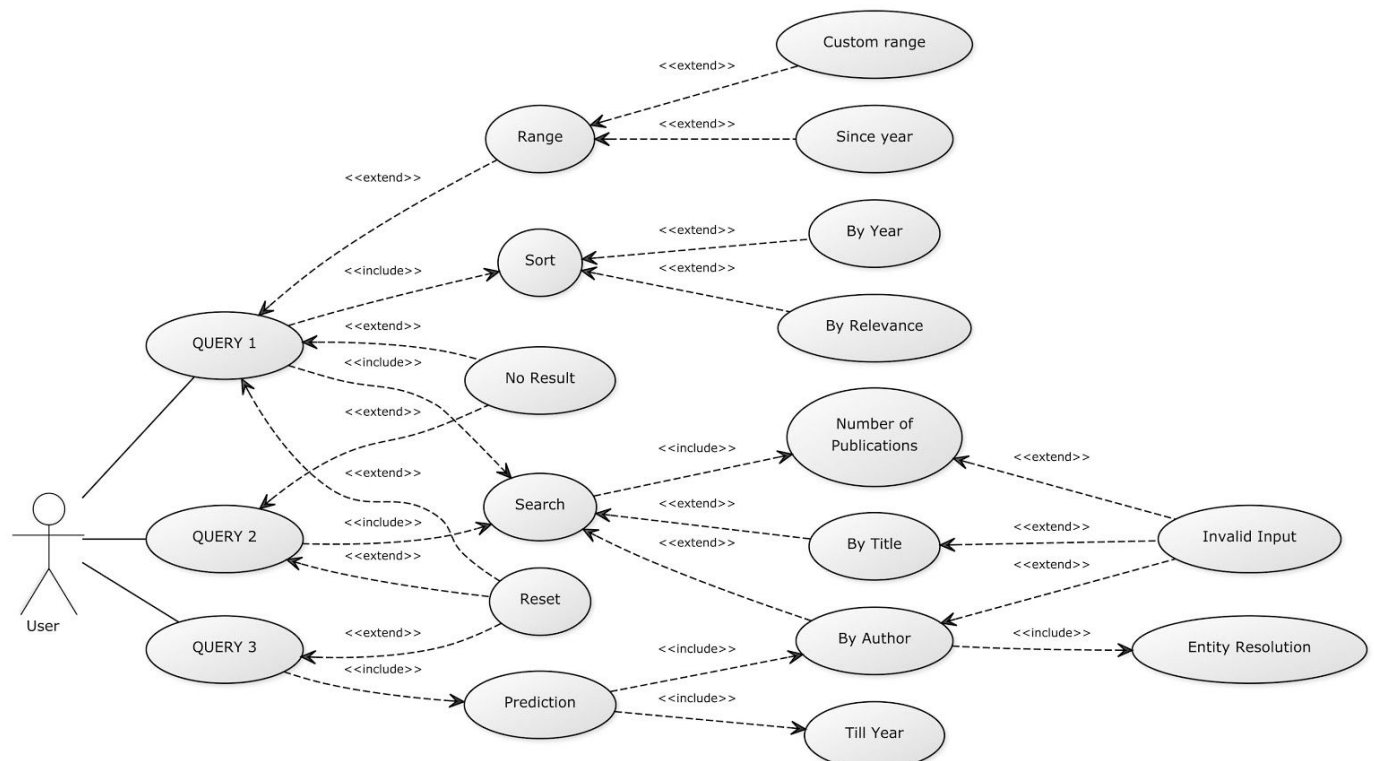
## USE CASE

**Participating Actors:** User

**Entry Conditions:** When the user enters the query number.

**Exit Condition:** Reset by User.

**Flow of Events:** User enters the query number. User enters required fields. Result is shown as per the query.



## CLASS DIAGRAM :

### Author Class

*Attributes:* they define the name of the author and help in matching for entity resolution. It also has aggregation with publication class such that they share a oneToMany relationship.

*Functionalities:*

- +MatchName() - returns how many of the specified search patterns match the author.
- +SortPublicationByDate() - sorts the aggregated publications by their date of creation.

### Publication Class

*Attributes :* they define the structure of the elements of the xml file.

### XMLParser:

*Functionalities :*

- +ParseDatabase() : uses DOM parser to parse the XML database;.
- +EntityResolution() : the Author Class's functionalities to sort the articles/journals/books to their corresponding author and store them in memory.

### Control

*Functionalities :* performs all the queries

- +SearchByAuthor() : searches by Author Name
- +SearchByTitle(): matches the maximum title tags

+ResultInRange(): gives the result in the specified range.

+MoreThanK(): returns the authors with more than K publications where K is specified by the user.

+SortResult(): sorts the result either by date or relevance as specified by the user.

+Predict(): based upon the data till the given year and given authors, predicts the data for the next year.

+Reset() : resets the app to the beginning.

## GUI

*Functionalities* : gives the UI for user to enter the queries and on specified events, uses the control class to produce the desired the result.

+ShowQueryPanel() : shows the panel as per the query specified.

+DisplayNext20() : shows the next twenty results.

