

Phase 4 Final Report

System Functionality

1. Search for an author

User can select the content type as “Author” in the search panel, add filters related to the Author such as Name, position in a committee (Program Chair, General Chair, Member, External Review, Conference Chair). The system displays a list of all matching authors. Color coded labels are shown under the author’s name specifying the author’s position in committees.

2. View author details

After the user has done the author search, click on the name of the author name from the displayed search results, the system will display the detailed information of the selected author such as his publications, his past roles as editor / program chair and other authors who are similar to him.

3. Search for a Publication

The user can select the content types as “Publication” in the search panel, choose a filter related to the Publication, such as title, year, author, volume and book title. The system displays all the Publications matching the specified filters.

4. View Publication details

After user has searched for a Publication, the user can click on the Publication title from the search results, and the system will display the detailed information of the selected Publication, including the information about the authors, year, volume etc.

5. Search for a Journal or Conference

The user can select the content types as “Journal” or “Conference” in the search panel, add a filter related to the Journal or Conference, such as title, year, editor, volume and book title. The system will display all the Journals or Conferences matching the specified filters.

6. View list of Publications under a specific Journal or Conference

After the user has done the searching for journal/conference, the user can click on a journal or conference from the search results. The system will display all the publications that are published within the selected conference/ journal along with the editors and a cumulative list of all the authors.

7. Shortlist author

In the detailed view of any author, the user can click on the start button besides the author name to shortlist the author. The button acts as a toggle. Clicking once adds the author to the shortlist. Clicking again would remove him from the short.

8. View shortlist authors

When user has added some author names to the shortlist, the user can click “view shortlist” button located on the left bottom of the search results panel. In the shortlist, user can remove any author

just by clicking on the remove button in each list item. The user can click on “click to add note” button, to add some note about the specific author, and choose a position for that author, such as program chair, general chair or conference chair etc. from the dropdown.

9. View previous screen (History)

As the user progressively views the detailed view of various items, the user can go back to the previous screen by clicking on the “Back” button on the bottom right corner of the screen.

10. Open in browser

In the detailed view of any item such as Journal, Conference or a publication, the user can click on the “Open in Browser” link at the top right corner to open any external link associated with the item in a native browser. This functionality is available only if the URL information of the associated item is available.

Summary of Changes since Phase III

1. System enhancement

We have added the interactive program committee shortlist functionality to our system. This shortlist functionality of the system will enable the user to select the most suitable candidates to form a program committee. The ability to add notes and assign a position to the shortlisted candidates will prove to be a valuable feature.

2. Refactoring

Refactoring was needed to incorporate the new requirements. We made sure there were no Anti-patterns in the system hence, no refactoring was required in this area.

- Bulk Data Indexing for elastic search server to make the indexing much faster resulting in faster searches
- Test improvement. We added Test data manager to manage our mock test data for Unit and Integration testing.
- Pre-loading of UI Layouts on separate thread for smooth loading of search results.

3. Design Patterns

- **Factory**

Elastic Search	<p>SearchQueryFactory: return the correct search queryObject based on the search type coming from the frontend. The application needed a different kind of query to be made from the ElasticSearch based on request.</p> <p>Data populater: Since we divided the data into categories like journal, conference, conferencePublication, JournalPublication, Author. Each entity has its own populater and a factory is used to get the correct populater based on the type of object. This gives the flexibility to add a new dataset by simply adding</p>
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	new populator for the dataset and integrate it with the existing data populato pipeline.
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- **Singleton**

Elastic Search connection	For Elastic Search connection. The application uses a single connection during a session
Shortlist Manager	Singleton instance to manage adding, removing and retrieving shortlisted authors
UI Manager	Singleton instance to retrieve information about the filters and their associated operators. Used to dynamically generate the filter combo box and the associate input field for the filter value

- **Observer**

For UI shortlist callback

UI Shortlist Callback	When the author detailed view is loaded, a publisher, subscribe relationship is created between the Home Controller and the Author Detailed View Controller. When the user shortlists or removes the author, the controller updates the home controller about the update.
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- **Visitor**

UI Preview history	Through a visitor pattern, the views that are loaded into the detailed preview pane are recorded. This allows the user to move to previous screen when the 'Back' button is clicked.
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4. More Testing

Since we have refactored our code and applied design pattern in order to accommodate new functionality, we have also added more test suits to cover all new functionality.

5. Integrating Jenkins with Slack

We have integrated Jenkins with our Slack channel, whenever we push our modified code to GitHub, Jenkins will start the building process automatically, and the building status will be sent to our Slack channel via notifications.

6. Integrating Jenkins with S3:

In order to bring our application in a continuous deployment mode, we integrated our Jenkins build to S3. Every green build pushes a new version of app to S3 location, from where it can be downloaded and ready to use. Link [Here](#)

Bug Fixes

Repository: [team1-test12](#)

Issue	Link
Unable to install the app on my machine	[Issue#1]
Bug while searching by year for arbitrarily large values	[Issue#2]
'Contains' and 'Does not contain' queries seem to return same results	[Issue#3]
Author filters: Committee chair/editor not working	[Issue#4]
Restrict the number of 'Add filter' operations based on actual permutations of filters	[Issue#5]
Publication Year = 00000000000000000000 gives weird results	[Issue#6]
NumberFormatException for large input numbers - across most numerical queries	[Issue#7]
Searching using "Equal To" filter does not do exact match	[Issue#8]
Publication Title "Starts With" query returns incorrect results	[Issue#9]
Unpredictable behavior of "Not equals" filter - part of larger query problem?	[Issue#10]
Missing Functionality - Sort Results, Shortlisting authors and Authors with similar profile	[Issue#11]
Possible enhancement - Decouple Data from the project source	[Issue#12]
Query input sanitization	[Issue#15]
Author details should include more information	[Issue#16]

Repository: [team-1-test11](#)

Issue	Link
Author Search: Unable to view any author details	[Issue#1]
Publication search: Result page scroll bar set to the position of conference publication	[Issue#2]
Author search: Ordering of the results	[Issue#3]
Journal search: Incorrect search result	[Issue#4]
Journal search: start with filter not working	[Issue#5]
Year filter: Search fails for non numeric values	[Issue#6]
Author search: Results are not inline with query	[Issue#7]
Less information the user have to make a selection	[Issue#8]
Program chair and editor search	[Issue#9]
Conference search: editor filter not returning any result	[Issue#10]
Elastic search	[Issue#11]
Publication search: Contains on author filter	[Issue#12]
Elastic search: Author name search not given correct results	[Issue#13]
Test coverage: 48.5% code coverage	[Issue#14]
Error while running test cases	[Issue#15]
Logger not used	[Issue#16]
Exception handling in the code	[Issue#17]
Code review comments	[Issue#18]

Repository: [team-1-test11](#)

Issue	Link
Issue with Installation	[Issue#1]
Not able to remove the filter criteria in UI	[Issue#2]
Search by author name : filter contains not working	[Issue#3]
Search by author name : filter not contains not working	[Issue#4]
UI stays in the previous search	[Issue#5]
multiple filters for search by author name is not working	[Issue#6]
author is program chair fetches zero results	[Issue#7]
Search by title: contains not working	[Issue#8]
Double clicking on the top left corner icon closes the application	[Issue#9]
Author name starts with result set issue	[Issue#10]
Results shows only a subset of the actual results	[Issue#11]
* character acts as wildcard search character	[Issue#12]
author is editor fetches zero results	[Issue#13]
publication, search by volume - screen goes to infinite wait loop	[Issue#14]
application crashed when search by publication author name	[Issue#15]
error / null pointer exception when loading journal details	[Issue#16]
publication search by issue number accepting negative numbers	[Issue#17]
publication search by year issue	[Issue#18]
Journal filter ISBN filter contains not working	[Issue#19]
Journal, search by series title not working	[Issue#20]
no sorting functionality of results	[Issue#21]
No comments in the code - suggestion	[Issue#22]
Test cases for UI are missing – suggestion	[Issue#23]
Heavy resource consumption – suggestion	[Issue#24]
running from eclipse, application goes to infinite loop	[Issue#25]
commented out code is not removed – suggestion	[Issue#26]
String is compared using ==	[Issue#27]
search conference, url starts with / - application goes to infinite loop	[Issue#28]
conference title contains not working	[Issue#29]
UI - fields are off in spacing	[Issue#30]
conference result set is the same for any filter	[Issue#31]
search publication by issue number not working	[Issue#32]