

Team20 Phase 4 Report

SYSTEM FUNCTIONALITY

1. Suggesting candidates who meet the user's criteria;
2. Showing an author's profile, which include his/her associated school, experience as a program committee member, and bibliography;
3. Helping the user create and maintain his/her own list of candidates;
4. Comparing the list of candidates of the user.

NEW FEATURES ADDED SINCE PHASE 3

- a) Original main page and result page are now merged into a single page;
- b) Inputting special characters is now prohibited;
- c) Message boxes added for warnings and progress;
- d) Charts added for comparing candidates;
- e) Drag-and-drop feature added to the page displaying an author's profile;
- f) Two new kind of information used: associated school and committee experience;
- g) Bibliography table now displays more information of a publication and author details;

REFACTORING

- a) Two helper classes (TableColumnAdder & UIElementFixer) for the user interface component are extracted;
- b) UserInterface.java renamed ConcreteUserInterface.java;
- c) Two interfaces that are intended to be used for the user interface are moved under a package named UserInterface.interfaces;

DESIGN PATTERN APPLIED

- a) Design Pattern Singleton applied onto classes MainPage and QueryEngine

```
private QueryEngine() {
    connectToDatabaseOrDisconnect();
}

private static QueryEngine queryEngine;

/**
 * Singleton Design Pattern Implemented
 *
 * @return Query Engine instance
 */
public synchronized static QueryEngine instance() {
    if (queryEngine == null) {
        return new QueryEngine();
    }
    return queryEngine;
}
```

```

public static MainPageSingleton instance() throws Exception{
    if (_theMainPage == null){
        return new MainPageSingleton();
    }
    return _theMainPage;
}
private static MainPageSingleton _theMainPage;


```

EACH SCREEN VISUAL SHARE AND FUNCTION DETAILS EXPLANATION

The screenshot shows the dblp (computer science bibliography) search interface. On the left, there's a sidebar with search criteria: 'Keyword in Title', 'Conference/Journals', 'Publication Year', 'Publication Number >=', and 'Serve Within'. Below these are buttons for 'My Favourite Author', 'Search', and 'Clear'. The main area displays a table of search results. The table has four columns: 'Author Name', 'Publication Title', 'Published Year', and 'Publication Pages'. The results list various authors and their publications, such as 'A. A. Kryuchyn' with 'Impact of aberrations on speckle suppression efficiency on mo...' published in 1979. A 'TEAM 20' logo is visible in the top right corner.

Author Name	Publication Title	Published Year	Publication Pages
A. A. Kryuchyn	Impact of aberrations on speckle suppression efficiency on mo...	1979	1-8
A. Álvarez Ferná...	Louvers design for LED displays for sunny days.	2002	167-173
Aaron B. Brown	Oops! Coping with human error in IT systems.	1999	34-41
Aart Middeldorp	Type Introduction for Equational Rewriting.	2013	1007-1029
Abbas Dehghani ...	Integration of sorting system for contaminant removal from wo...	2006	843-853
Abbas Z. Kouzani	Characterization and optimization to improve uneven surface o...	1983	54-61
Abdallah Namoun	Designing and evaluating a system of document recognition to ...	1997	598-608
Abdeljalil Madi	Color constancy for visual compensation of projector displayed...	1979	6-17
Abdelghani Bekrar	A rail-road PI-hub allocation problem: Active and reactive appr...	1998	138-151
Abderrahmane K...	VITAL: An electromagnetic integrated tactile display.	1979	133-144
Abdul Azeez Abd...	Modeling the permeability of carbonate reservoir using type-2 f...	1990	147-163
Abduljalil Moham...	Evidence-Based Combination of Weighted Classifiers Approac...	1997	27-44
Abdul R. Farooq	Dynamic photometric stereo for on line quality control of ceram...	1982	918-934
Abhijit Mitra	Search for Protein Sequence Homologues that Display Consid...	2003	55-77
Abhishek Das	Stream Processors: Programmability and Efficiency.	2003	52-62
A. Bijlsma	A Sharp Proof Rule for Procedures in wp Semantics.	2013	409-419
A. Bijlsma	Equivalence of the Gries and Martin Proof Rules for Procedure ...	1992	357-360
Abraham Mendoza	Estimating freight rates in inventory replenishment and supplie...	2003	185-196
Abraham Silbers...	A Characterization of Database Graphs Admitting a Simple Loc...	1981	1-13
Abraham Silbers...	Addendum to Null Values in Nested Relational Databases.	2003	607-610
Abraham Silbers...	Null Values in Nested Relational Databases.	2003	615-642
Abraham Silbers...	Remarks on "Some Comments on Concurrent Readers and Wri..."	1995	57-60
Abubaker Shaouf	The effect of web advertising visual design on online purchase i...	1996	622-634
Achim D. Brucker	Semantics, calculi, and analysis for object-oriented specificatio...	1980	255-284
Achim Muntean	The impact of inventory sharing on the bullwhip effect in decent...	2003	89-98

- 1) This is our system main screen. Left Part is user's criteria part. Right Part is result of criteria.
- 2) Button Search can get the search result. If nothing for criteria, then we get all the authors and their publications.
- 3) Button Clear can clean the criteria of the Left Part which allow user to re-fill.
- 4) Button My Favorite Author can link to Candidate Page
- 5) User can search the publications by type in either all or part or single of these: Keywords in Title, Conference/Journals related the publication, a publication year, the authors who's total number publication more than certain number, and whether the author was served as any committee within certain years.



computer science bibliography

Search Criteria

Keyword in Title

Conference/Journals


Publication Year

Publication Number >=

☐ AND

Serve Within


My Favourite Author Search Clear



View Author Profile Compare Candidates

Author Name	Publication Title	Published Year	Publication Pages
Alexander Meduna	Scattered context grammars that erase nonterminals in a gener...	2007	593-608
Angelo Montanari	A theory of ultimately periodic languages and automata with an...	2007	331-360
Brian Randell	A Formal Model of Atomicty in Asynchronous Systems.	2007	93-124
Burkhard Monien	The LBA-Problem and the Deterministic Tape Complexity of Tw...	2007	371-382
C. K. Wong	Generating Binary Trees of Bounded Height.	2007	529-544
Daive Bresolin	A theory of ultimately periodic languages and automata with an...	2007	331-360
David Gries	An Axiomatic Proof Technique for Parallel Programs I.	2007	319-340
Dominic Duggan	Type-based hot swapping of running modules.	2007	181-220
D. T. Lee	Generating Binary Trees of Bounded Height.	2007	529-544
Eike Best	A Formal Model of Atomicty in Asynchronous Systems.	2007	93-124
Elisabetta Grazzini	Exhaustive generation of combinatorial objects by ECO.	2007	585-602
Elisa Pergola	Exhaustive generation of combinatorial objects by ECO.	2007	585-602
Gary T. Leavens	Specification and Verification of Object-Oriented Programs Usi...	2007	705-778
George Rahonis	On two Families of Forests.	2007	235-260
Grzegorz Rozenb...	A Characterization of Context-free String Languages by Directe...	2007	63-85
Hans-Dieter Ehrlich	Minimale und m-minimale Variablenmengen für partielle Boole'...	2007	172-179
Helmut Seidl	Tree Automata for Code Selection.	2007	741-760
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Jon Louis Bentley	Quad Trees: A Data Structure for Retrieval on Composite Keys.	2007	1-9
Juha Honkala	On Slender OL Languages over the Binary Alphabet.	2007	805-815
K. Vidyasankar	Generalized Theory of Serializability.	2007	105-119
Luca Aceto	Special issue: Selected papers from the 28th International Conf...	2007	1-2
Masataka Sassa	Generation of Efficient LALR Parsers for Regular Right Part Gr...	2007	149-162
Michel Lattaux	On Characterizations of Recursively Enumerable Languages.	2007	178-186
Niklaus Wirth	The Programming Language Pascal.	2007	35-63

- Right Part user can search interested information of one publication.
- Button View Author Pages allowed user to watch details of the author he/she has interested.
- Button Compare Candidates will link to Compare Page



Reinhard Wilhelm

Associated School: N/A

Add to candidate list Find similar authors My Favorite Author

Bibliography

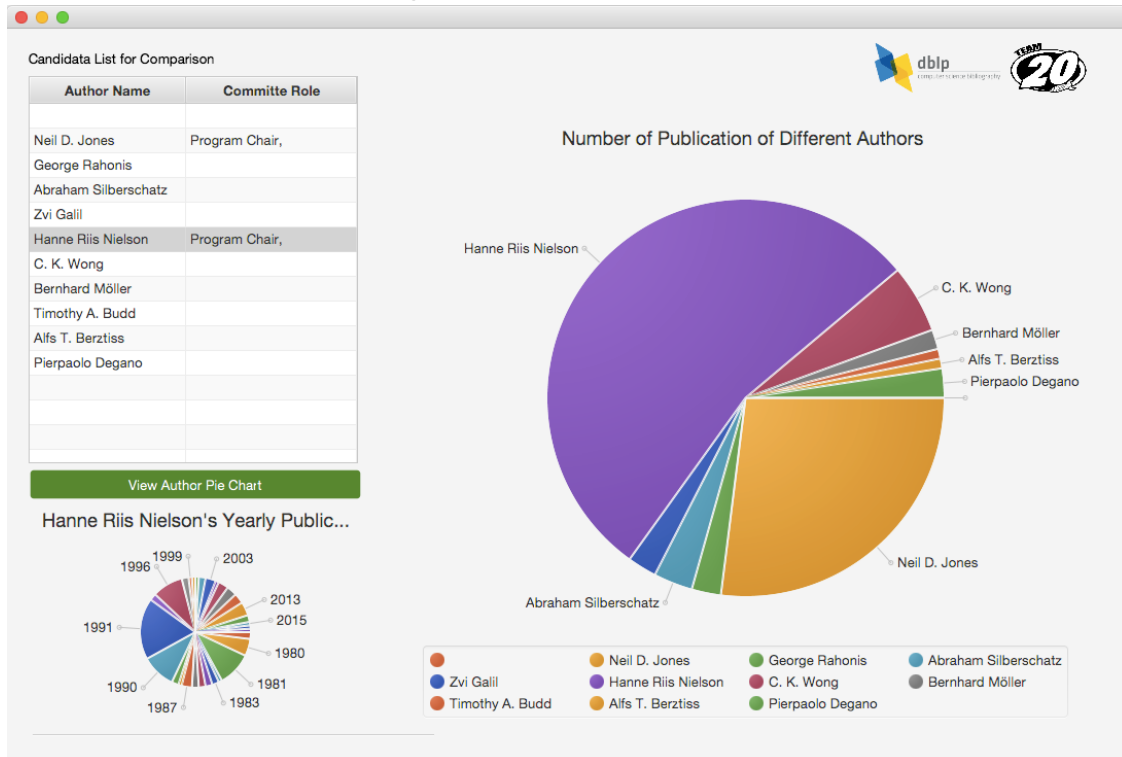
Type	Title	Year	Publisher	Book Title	Journal	Volume	Number	School	Pages
inprocee...	Why AI + I...	1986	N/A	VMCAI	N/A	N/A	N/A	N/A	309-322
inprocee...	Analysis o...	1989	N/A	Software Verific...	N/A	N/A	N/A	N/A	N/A
inprocee...	Solving S...	1989	N/A	POPL	N/A	N/A	N/A	N/A	16-31
inprocee...	Tree Tranf...	1989	N/A	WAGA	N/A	N/A	N/A	N/A	116-129
inprocee...	2DT-FP: ...	1990	N/A	PARLE	N/A	N/A	N/A	N/A	42-55
articles	Logical C...	1990	N/A	N/A	CoRR	cs.LQ/03...	N/A	N/A	N/A
inprocee...	Algorithm ...	1991	N/A	Software Visual...	N/A	N/A	N/A	N/A	381-394
inprocee...	Grammar ...	1992	N/A	Attribute Gram...	N/A	N/A	N/A	N/A	151-186
inprocee...	Software ...	1992	N/A	SWQD	N/A	N/A	N/A	N/A	1-11
inprocee...	Parametri...	1992	N/A	POPL	N/A	N/A	N/A	N/A	105-118
inprocee...	A Truly G...	1995	N/A	SIGPLAN Sym...	N/A	N/A	N/A	N/A	172-184

Experience

Committee	Role	Year
esop	Program Chair	1986
pldi	Member	2003
popl	Member	2000

- In the Author Profile Page, user can check all this author's publication and their details such as type of this publication, title of it, year of published, publisher, book title, journal if has, volume, etc.

- 10) In the Author Profile Page, user can view this author's experience in committees which include in which year, he attend which committee and was what kind of role.
- 11) In the Author Profile Page, user can click button Add to Candidate list to add this author into Candidate Page.
- 12) In the Author Profile Page, user can click button Find Similar Author to get author list who write same publication with him/her, or who attend the same committee with him/her at the same year.
- 13) In the Author Profile page, user can drag this author name to the top right corner can quick add this author into Candidate List/Page.



- 14) In the Compare Page, user can see all the candidate which he selected from the Author Page and these author's Committee Role.
- 15) In the Compare Page, user can see these authors distribution of their number of publication. For instance, from this page, use can know author Hanne Rils Nielson wrote more publications.
- 16) In the Compare Page, user can select one author name from the left list and click button View Author Pie Chart, then a new pie chart appears and shows the distribution on publication years of an author. During this pie chart, user can know on which this author most work focused and whether his working interrupted or not.
- 17) In the Similar Author Page, user can check other user's name and details.
- 18) In the Candidate Page, user can view all the authors name who the user added by page navigation.
- 19) In the Candidate Page, user can view single or multiple remove the author names.