**Your Name: Shousan Liao**

**Your Andrew ID: shousanl**

**Homework 1**

# Introduction

## Collaboration and Originality

1. Did you receive help of any kind from anyone in developing your software for this assignment (Yes or No)? It is not necessary to describe discussions with the instructor or TAs.

No

If you answered Yes, provide the name(s) of anyone who provided help, and describe the type of help that you received.

1. Did you give help of any kind to anyone in developing their software for this assignment (Yes or No)?

No

If you answered Yes, provide the name(s) of anyone that you helped, and describe the type of help that you provided.

1. Did you examine anyone else’s software for this assignment (Yes or No)? It is not necessary to mention software provided by the instructor.

No

1. Are you the author of every line of source code submitted for this assignment (Yes or No)? It is not necessary to mention software provided by the instructor.

Yes

If you answered No:

* 1. identify the software that you did not write,
  2. explain where it came from, and
  3. explain why you used it.

1. Are you the author of every word of your report (Yes or No)?

Yes

If you answered No:

* 1. identify the text that you did not write,
  2. explain where it came from, and
  3. explain why you used it.

## *Instructions*

***Leave the page breaks between sections, as shown in this file. This is will reduce the number of duplicate pages in your graded report.***

***Sections 5 and 6 ask you to discuss your experimental results. Do not just summarize the results – we can read the tables. Instead, give us your interpretation of the results. This is your chance to show what you learned from the experiments. Recommended length: Less than ¾ of a page each.***

***Instructions are shown in a red italic bold font. Do not include instructions in your report. For example, delete this page. There is a 2 point deduction for leaving instructions in your report (because it creates extra work for the TAs).***

# Structured queries

## Query structuring strategies

***Briefly describe your strategies for creating structured queries. These should be general strategies (i.e., not specific to any particular query) that you used in Section 2.2***

## Queries

***Show your structured queries. Indicate which of the strategies described above (Question 2.1) you used for each query.***

# Experimental Results for Unranked Boolean

***Present your experimental results for each query set, in the format shown below.***

***Your .zip / .tgz file must include files named HW1-Exp-3a.qry, HW1-Exp-3a.param, etc., in the QryEval directory. The experimental results shown below must be reproducible by these files.***

|  |  |  |  |
| --- | --- | --- | --- |
|  | **BOW #OR**  **(Exp-3a)** | **BOW #AND**  **(Exp-3b)** | **Structured**  **(Exp-3c)** |
| **P@10** | 0.0000 | 0.0000 | 0.0000 |
| **P@20** | 0.0000 | 0.0000 | 0.0000 |
| **P@30** | 0.0000 | 0.0000 | 0.0000 |
| **MAP** | 0.0000 | 0.0000 | 0.0000 |
| **Running Time** | mm:ss | mm:ss | mm:ss |

# Experimental Results for Ranked Boolean

***Present your experimental results for each query set, in the format shown below.***

***Your .zip / .tgz file must include files named HW1-Exp-4a.qry, HW1-Exp-4a.param, etc., in the QryEval directory. The experimental results shown below must be reproducible by these files.***

|  |  |  |  |
| --- | --- | --- | --- |
|  | **BOW #OR**  **(Exp-4a)** | **BOW #AND**  **(Exp-4b)** | **Structured**  **(Exp-4c)** |
| **P@10** | 0.0000 | 0.0000 | 0.0000 |
| **P@20** | 0.0000 | 0.0000 | 0.0000 |
| **P@30** | 0.0000 | 0.0000 | 0.0000 |
| **MAP** | 0.0000 | 0.0000 | 0.0000 |
| **Running Time** | mm:ss | mm:ss | mm:ss |

# Analysis of Ranking Algorithm Behaviors

***Discuss the behavior of the two ranking algorithms on the three different types of queries. Possible issues are interactions between type of query with type of algorithm, accuracy vs. running time, and accuracy vs. time spent forming queries; however, you may discuss what seems most appropriate for your experience.***

# Analysis of the Effects of Query Operators and Fields

***Discuss the behavior / usefulness of the different query operators and fields, and your success and failure at using them in structured queries. Possible issues are which operators or fields produced predictable or unpredictable behavior; which operators or fields are more or less useful; effects on running time; and the ease or difficulty of forming good structured queries. However, you may discuss what seems most appropriate for your experience.***