

Week 6: Discussion Question

Are there any benefits in creating indexes on tables? What about any issues in using indexes?

The benefits of creating indexes on tables includes

And index scan is more efficient than a full table scan because the index data are preordered and the amount of data is usually much smaller. Therefore, when performing searches, it is almost always better for the DBMS to use the index to access a table than to scan all rows in a table sequentially (Rob and Coronel, 2009).

The DBMS saves processing time by only accessing those rows that meet the index criteria rather than all the rows in the table. Adding index to a column that is a text field allows for quick and efficient text searches on the contents of that field using wildcards (Bhatti, 2009), for example:

```
SELECT * FROM person WHERE last_name LIKE 'B%';
```

Will pull all rows from the database where the last name begins with a “B”

The disadvantages of indexes includes the fact that they take up additional disk space, which is relative to the size of the table indexed and the number of columns indexed. Additionally, modifications to table data will take longer, as the INSERT, UPDATE, and DELETE operations must update the index reference as well as the table on which the transaction is being made (IBM, 2009).

References:

Bhatti, Javed (2009). *What are advantages and disadvantages of indexes in MySQL?* MySQL FAQs. Retrieved from [mysqlfaqs.net](http://www.mysqlfaqs.net/mysql-faqs/Indexer/What-are-advantages-and-disadvantages-of-indexes-in-MySQL) Aug 14, 2009 at: <http://www.mysqlfaqs.net/mysql-faqs/Indexer/What-are-advantages-and-disadvantages-of-indexes-in-MySQL>

IBM (2009). *Advantages and Disadvantages of Indexes*. IBM. Retrieved from [publib.boulder.ibm.com](http://publib.boulder.ibm.com/infocenter/db2luw/v8/index.jsp?topic=/com.ibm.db2.udb.doc/admin/c0005052.htm) Aug 14, 2009 at: <http://publib.boulder.ibm.com/infocenter/db2luw/v8/index.jsp?topic=/com.ibm.db2.udb.doc/admin/c0005052.htm>

Rob, Peter and Coronel, Carlos (2009). *Database Systems: Design, Implementation, and Management, Eighth Edition*. Course Technology, Boston MA.