Computer Science
Homework for Chapter 9   **Due: 2010/05/26**

_____1. Given the relation X below

X: | A | B | C |
    |---|---|---|
    | 2 | 5 | 7 |
    | 3 | 3 | 3 |
    | 4 | 4 | 2 |
    | 5 | 2 | 8 |

what value will be retrieved by the following query?

```
TEMP ← SELECT from X where B = C
RESULT ← PROJECT B from TEMP
```

A. 2   B. 3   C. 4   D. 5

_____2. Which of the following features within a DBMS is not provided to maintain database integrity?

A. Concurrent transaction processing   B. Log
C. Locking protocol   D. Commit points

_____3. Which of the following data mining techniques would be applied when trying to identify any underlying heterogeneity within housing patterns in a community?

A. Class description   B. Class discrimination
C. Cluster analysis   D. Association analysis

_____4. Which of the following file structures is associated with the problem of clustering?

A. Sequential   B. Indexed   C. Hash

_____5. Which of the following describes only the portion of a database available to a particular user?

A. Database model   B. Schema   C. Subschema D. DBMS

_____6. Which of the following is not a potential problem caused by multiple transactions manipulating a database at the same time?

A. Lost update problem   B. Clustering
C. Deadlock   D. Incorrect summary problem

7. In the following table, connect the term to each phrase that gives the best description of the term.   (40%)

Term		Descriptive Phrase
Schema	_____	**A.** A conceptual organization of data within databases
Index	_____	**B.** A "road map" of a particular database's design
hash file	_____	**C.** Performs database operations requested by application software
DBMS	_____	**D.** A popular language that implements relational database operations
clustering	_____	**E.** A structural unit (with rows and columns) in a popular database model
locking protocol	_____	**F.** Select, project, and join
relational operations	_____	**G.** To "unwind" a transaction
data mining	_____	**H.** The time at which a DBMS guarantees that a transaction's actions will be reflected in a database
key field	_____	**I.** A system to guard against database errors due to performing transactions concurrently
data warehouse	_____	**J.** The process of extracted hidden information
sequential file	_____	**K.** The information system to which data mining techniques are applied
commit point	_____	**L.** A storage structure that provides efficient access to randomly chosen items
relation	_____	**M.** A major problem when manipulating hash files
roll back	_____	**N.** A storage structure that associates a specific order with its contents
SQL	_____	**O.** A means of locating a particular record within a file
database model	_____	**P.** An item used to identify records uniquely