Ch 1 questions

1. IBM’s Information Management System, GE’s Integrated Data Store, Oracle, IDMS
2. Sets up storage structures, loads data, performs updates, hides certain data, and controls concurrency
3. Can be used simultaneously by many users, as little repetition as possible, and metadata is recorded
4. A database is a collection of related stored data. A DBMS is the software package that controls access to the database.
5. Data consistency: updates automatically apply to every occurrence of that item

Better data security: the DBMS can encrypt the data before storing it

Improved data integrity: DBA can define integrity constraints

Better data accessibility: interactive access by users through query languages

Better backup and recovery: self-recovering system with logs that can bring a database back to a previous state.

1. Designing, creating the structure of, and maintaining the database.
2. An end user would be someone like the clerk in a registrar’s office. They could use a database to search for a student’s transcript.

8. An accounting department might use sequential batch processing for expense reporting.

9. Integrated database – collection of related data that can be used simultaneously by many departments and users

Enterprise – a business or organization which uses a large database

Metadata – data about data

Concurrent use – allowing multiple users access at the same time

Query – questions about the data

End user – people who use the data to perform their jobs

Data redundancy – data that is stored more than once

Data consistency – changes are updated automatically to every occurance of an item

Integrity constraint – consistency rules that the database must obey

Data encryption – avoiding users bypass the DBMS and gain access to the data in an illegal manner

Economy of scale – pooled resources resulting in lower costs

Backup – a copy of the database records

Recovery log – a recorded log of changes

Semantic model – attempts to capture the meaning of the data it represents

SQL – structured query language

XML – extensible markup language

Data mining – exploit the information of data warehouses

Big data – data and the variety of technologies used to organize and process it