* 1. Give four examples of database systems other than those found in section 1.1.
     1. Social Media sites
     2. Netflix and media streaming sites,
     3. Personal storage of addresses in an Access database
     4. Post offices to send and receive mail.
  2. Name five tasks performed by the DMBS
     1. Setup storage structures
     2. Load the data
     3. Accept data requests
     4. Format retrieved data
     5. Hide restricted data
  3. List 3 functions you can do in a database that you cannot do with a spreadsheet.
     1. You can tie tables together with relationships.
     2. You can use keys to better describe and restrict information in tables.
     3. You can write queries to interact with a database.
  4. List 5 advantages of a database system and give examples
     1. Sharing of data: Many users at BYU can be authorized to access the same information.
     2. Control of redundant data: the databases at BYU are all tied together so you aren’t repeating information.
     3. Better data security: At BYU, you can restrict which users can access which data.
     4. Better data accessibility: users can interact with a DBMS and write queries to access the data.
     5. Scalability: at BYU, as it grows the databases can grow and scale with it, as well as resulting in lower costs when its demands can be satisfied by one table instead of many files.
  5. List 3 responsibilities of a DBA
     1. Creating and maintaining a database to satisfy the needs of users.
     2. Interacts with the database as a “superuser” who controls access to information
     3. Analyses and determines the data needs of users.
  6. Give an example of an end user and describe a typical task that that user can perform on a database.
     1. A person located in BYU’s account administration may interact with the database to update, create a new student, or delete an erroneous student record.
  7. Definitions
     1. D: concurrent use – When two or more users are accessing the same information at the same time.
     2. G: Data redundancy – When multiple copies of the same data are stored. This should not happen unless necessary.
     3. H: data consistency – The same data may be stored, but making sure that that instance of data is the exact same in every location so that it is all up to date.
     4. I: integrity constraint – consistency rules that a database has to follow so the data can maintain its integrity. It is important that data is never inserted that violates its constraints.
     5. O: semantic model – A semantic model is one that tries to capture the meaning of the data that it represents
     6. Q: XML – Extensible Markup Language. It is a semi-structured data model that is used to describe the format of data residing in differently structured data stores.
     7. R: Data mining – A process of analyzing historical data statistically to enable an organization to unearth trends that may be present.