**Week 5 Notes**

* SQL is a declarative language
* Queries can be divided into three types
  + Data driven language
    - Effects schema
    - Commands that maintain and query a database
    - Contain commands such as SELECT, INSERT, UPDATE, DELETE statements
  + Data manipulation language
  + Data control language
    - Commands that control database
* Datatypes
  + Int, float, decimal(p, s)
  + Strings
    - Char
    - Varchar
    - Text
  + Boolean
  + Date, time, timestamp
  + Dates – year, month, and day values
  + Time – hour, minute, and second values
  + Timestamp – year, month, day, hour, minute, and second values
  + Binary large objects
* Steps in Table Creation
  + Identify data types for attributes
  + Identify columns that can and cannot be null
  + Identify columns that must be unique
  + Identify primary key-foreign key mates
  + Identify constraints on columns
  + Create table associated indexes
* Data integrity controls
  + Referential integrity – constraint that ensures that foreign key values of a table must match primary key values of a related table
  + Options
    - Restricting
    - Cascading
    - Set to null/default
* Foreign Key Creation
* Changing tables – ALTER TABLE
* Removing Tables – DROP TABLE
  + Cannot drop tables that are referenced in other tables
  + Must drop tables in a certain sequence due to foreign keys

SQL basic commands

* INSERT: insert data into a table
* UPDATE: modifies data in existing rows
* TRUNCATE: help remove all records
* SELECT: used to view data from table
  + SELECT
  + FROM
  + WHERE
  + GROUP BY
  + HAVING
  + ORDER BY