



ASSIGNMENT 1

CIS 310-01

Chad Daily, Dalton Sacre, Robert Weedman, and Mason Wuest

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1. The structure that we are observing in figure P-1.1 from our text will consist of seven total records. What is a record? A record is a collection of specific data that is related to a specific

PROJECT_CODE	PROJECT_MANAGER	MANAGER_PHONE	MANAGER_ADDRESS	PROJECT_BID_PRICE
21-5Z	Holly B. Parker	904-338-3416	3334 Lee Rd., Gainesville, FL 37123	16833460.00

related entity. In terms of our current file structure, a row in a table is known as record.

The image above is an example of a record we would find in a specific table. A record is also comprised of many related fields, but in terms of the textbook example we will have five fields in our current example. The fields are as follows: PROJECT_CODE, PROJECT_MANAGER, MANAGER_PHONE, MANAGER_ADDRESS, and PROJECT_BID_PRICE. These specific fields are what defines the various records that are comprised within the table. Each field in a known file structure can be made up of several data types. In our current file structure, each column represents a field.

2. The problem with the current file structure is that it would be rather difficult to produce a listing by city because of all parts of the address are listed in one specific field. Trying to construct a specific query to interpret the city and sort the data would become very tiresome if the record size was to increase exponentially. To solve this data structure problem we will have to separate each part of the address which is currently stored in the MANAGER_ADDRESS field. Once separated we will be able to query specifically by city, street, and zip code.
3. In terms of file structure, we see the amount of information increase within our table due to the number of fields being added because of the manager address being divided into multiple fields. The new fields being added include: MANAGER_STREET, MANAGER_CITY, MANAGER_STATE, and MANAGER_ZIP. We will now be able to query by all specific parts of the address instead the beginning of an MANAGER_ADDRESS.
4. The repetition of data within this table is apparent throughout many fields in this database. The apparent repetition of data may lead to anomalies in our database. These may include an

update anomaly, an insertion anomaly, and deletion anomaly. The update anomaly will be heavily noticeable when an address changes for a manager. The insertion anomaly will occur when adding a manager to the table. The deletion anomaly will occur when records become obsolete and deleted.