

# Assignment 1

## Introduction to Database Management System

### Spring 2022

Given the file structure shown in Figure 1, answer Problems 1 – 4

**Figure 1. the file structure for problem 1-4**

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
25-2D	Jane D. Grant	615-898-9909	218 Clark Blvd., Nashville, TN 36362	12500000.00
25-5A	George F. Dorts	615-227-1245	124 River Dr., Franklin, TN 29185	32512420.00
25-9T	Holly B. Parker	904-338-3416	3334 Lee Rd., Gainesville, FL 37123	21563234.00
27-4Q	George F. Dorts	615-227-1245	124 River Dr., Franklin, TN 29185	10314545.00
29-2D	Holly B. Parker	904-338-3416	3334 Lee Rd., Gainesville, FL 37123	25559999.00
31-7P	William K. Moor	904-445-2719	216 Morton Rd., Stetson, FL 30155	56850000.00

1. How many records does the file contain? How many fields are there per record?
2. What problem would you encounter if you wanted to produce a listing by city? How would you solve this problem by altering the file structure?
3. If you wanted to produce a listing of the file contents by last name, area code, city, state, or zip code, how would you alter the file structure?
4. What data redundancies do you detect? How could those redundancies lead to anomalies?