1. How many records does the file contain? How many fields are there per record?

There are 7 records from 21-5Z through 31-7P. There are 5 different fields.

1. How many records does the file contain? How many fields are there per record?

There are 7 records from 21-5Z through 31-7P. There are 5 different fields.

1. How many records does the file contain? How many fields are there per record?

There are 7 records from 21-5Z through 31-7P. There are 5 different fields.

1. How many records does the file contain? How many fields are there per record?

There are 7 records from 21-5Z through 31-7P. There are 5 different fields.

1. How many records does the file contain? How many fields are there per record?

There are 7 records from 21-5Z through 31-7P. There are 5 different fields.

1. How many records does the file contain? How many fields are there per record?

There are 7 records from 21-5Z through 31-7P. There are 5 different fields.

**1. How many records does the file contain? How many fields are there per record?**

There are 7 records from 21-5Z through 31-7P. There are 5 different fields.

**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?**

The questions are a major issue when listening by city names. It becomes a bother and more difficult to write and find in the database. This issue is easy to resolve. City names should go in their own section if they are significant.

**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?**

You would want to do the same thing as above. You would want to break it all down into what they have it now and break it to have the file structure.

**4. What data redundancies do you detect? How could those redundancies lead to anomalies?**

We can see from the file structure that Holly B. Parker appeared three times. This can be redundant if it appears three times. The files themselves must be accurately updated and rectified. She will need to verify that what she has submitted is accurate because Holly B. Parker came up three times. One mistake or incorrect detail can cause an issue. The issue will take into account various data, even if it comes from the same source.

We can see from the file structure that Holly B. Parker appeared three times. This can be redundant if it appears three times. The files itself has to be fixed and updated correctly. She will need to verify that what she has submitted is accurate because Holly B. Parker came up three times. One mistake or incorrect detail can cause an issue. Even if the data comes from the same person, the issue will take it into account.5. Identify and discuss the serious data redundancy problems exhibited by the file structure

shown in Figure P1.5.

**5. Identify and discuss the serious data redundancy problems exhibited by the file structure shown in Figure P1.5.**

The file structure is not that great. It has multiple anomalies. Under JOB\_CODE=EE changes the JOB\_CHG\_HOUR, it would need to be changed twice. This will cause problems in the future if any data is changed. Overall, this whole File Structure has problems and need to be changed.

**6. Looking at the EMP\_NAME and EMP\_PHONE contents in Figure P1.5, what change(s) would you recommend?**

A change I would make is organizing them. By them, I mean by the names. So having it under EMP\_FNAME and EMP\_LNAME. This way it would be good and easier to find the data from the employees. I also think the EMP\_PHONE can be more organized. This saying, having area code differences to the actual phone digits can be more organized.

**7. Identify the various data sources in the file you examined in Problem 5.**

The data sources are information about the employees, such as names and phone numbers. Project information is also included, such as the project names and hours. Project names and hours, on the other hand, are not traits of an employee and should therefore be kept in a separate file. Job information includes things like job fee per hour.

**8. Given your answer to Problem 7, what new files should you create to help eliminate the data redundancies found in the file shown in Figure P1.5?**

The new data files that should be created should be something along the lines of JOB, EMPLOYEE, PROJECT, and JOB\_CHARGE. This way, data about project can be separated into the project file such as project name and project number. The EMPLOYEE file should have data involving the employee like their names, employee number, address, and phone number. The JOB file would have billing data like the job charge per hour and job code. Lastly, the CHARGE file would have data about the hours according to the job code.

**9. Identify and discuss the serious data redundancy problems exhibited by the file structure shown in Figure P1.9. (The file is meant to be used as a teacher class assignment schedule. One of the many problems with data redundancy is the likely occurrence of data inconsistencies – that two different initials have been entered for the teacher named Maria Cordoza.)**

The file structure has some major issues with data redundancy. The teacher's first and last name is one illustration. In the file hierarchy, Horace Williston appears twice. This implies that if the name is changed just once, the change must be applied to all fields that use the name. If the change only affects one record involving Horace Williston and not the other, it could be difficult to determine if the second record features a new teacher or the same one as the first. All the other columns in the file structure show the same instance of redundant data.

**10. Given the file structure shown in Figure P1.9, what problem(s) might you encounter if building KOM were deleted?**

All information pertaining to Horace Williston, Maria Cordoza, and Anne Hawkins would be erased if the building KOM were to be destroyed. This provides the names of the teachers, their precise days and times, room codes, and building codes. It's crucial that entities (columns) have their own tables with their own data because of this.