

Task#01

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1. The file contains 7 records, each record has 5 fields
2. Listing by city
 - a. Problem: The city code from `MANAGER_ADDRESS` would have to be extracted
 - b. Solution: A new field for the city code should be added
3. We can split each part of `PROJECT_MANAGER` and `MANAGER_ADDRESS` to a separate field (eg. `PROJECT_MANAGER_FNAME`, `PROJECT_MANAGER_MINIT`, etc.)
4. Data redundancy problems are:
 - a. There are 3 records of `Holly B. Parker` and 2 records of `George F. Dorts`
 - b. These redundancies can create inconsistencies of `PROJECT_MANAGER` personal information (`MANAGER_PHONE` and `MANAGER_ADDRESS`)
5. Data redundancy problems are:
 - a. Each unique `PROJ_NAME` is represented by a unique `PROJ_NUM`, but both of them are stored together in each record (only 1 of them should be stored)
 - b. Each unique `EMP_NUM` represented a unique employee, but the employee's personal information (`EMP_NAME`, `JOB_CODE`, `EMP_PHONE`) is stored in each record (only `EMP_NUM` should be stored)
6. `EMP_NAME` and `EMP_PHONE` should be move to another file that stores all of employees' personal information
7. Project and employee detailed information
8. 2 new files should be created:
 - a. A file to store the number and name of each project
 - b. A file to store each employee personal information
9. Data redundancy problems are:
 - a. Each unique `ROOM_CODE` belongs to a unique `BUILDING_CODE`, but both of them are stored together in each record (only `ROOM_CODE` should be stored)
 - b. Each teacher has a unique combination of `LNAME`, `FNAME` and `INITIAL`, but all of them are stored in every record (can lead to data inconsistency)
10. If building KOM were deleted, every records that have it as `BUILDING_CODE` will be deleted/become invalid