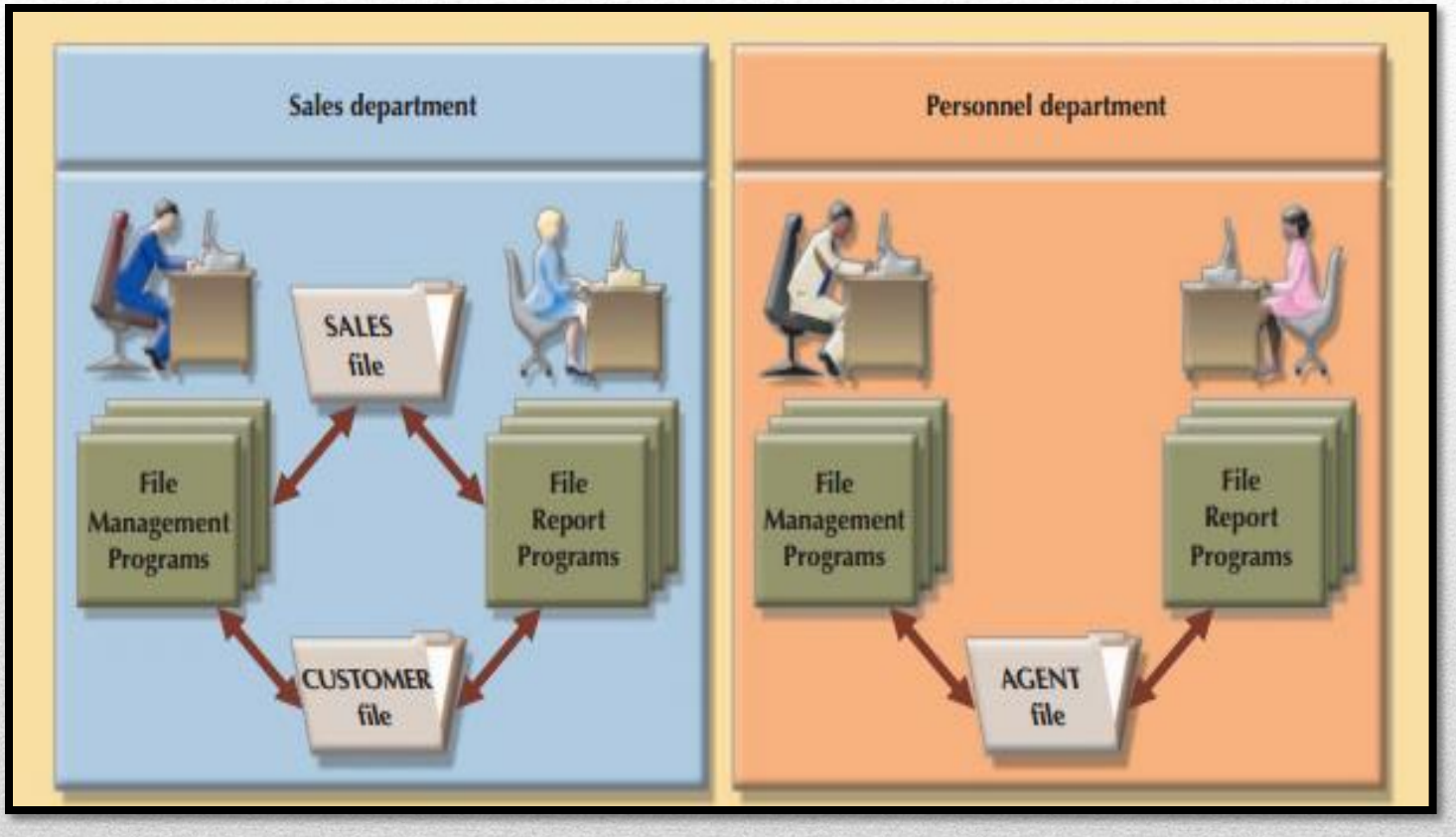
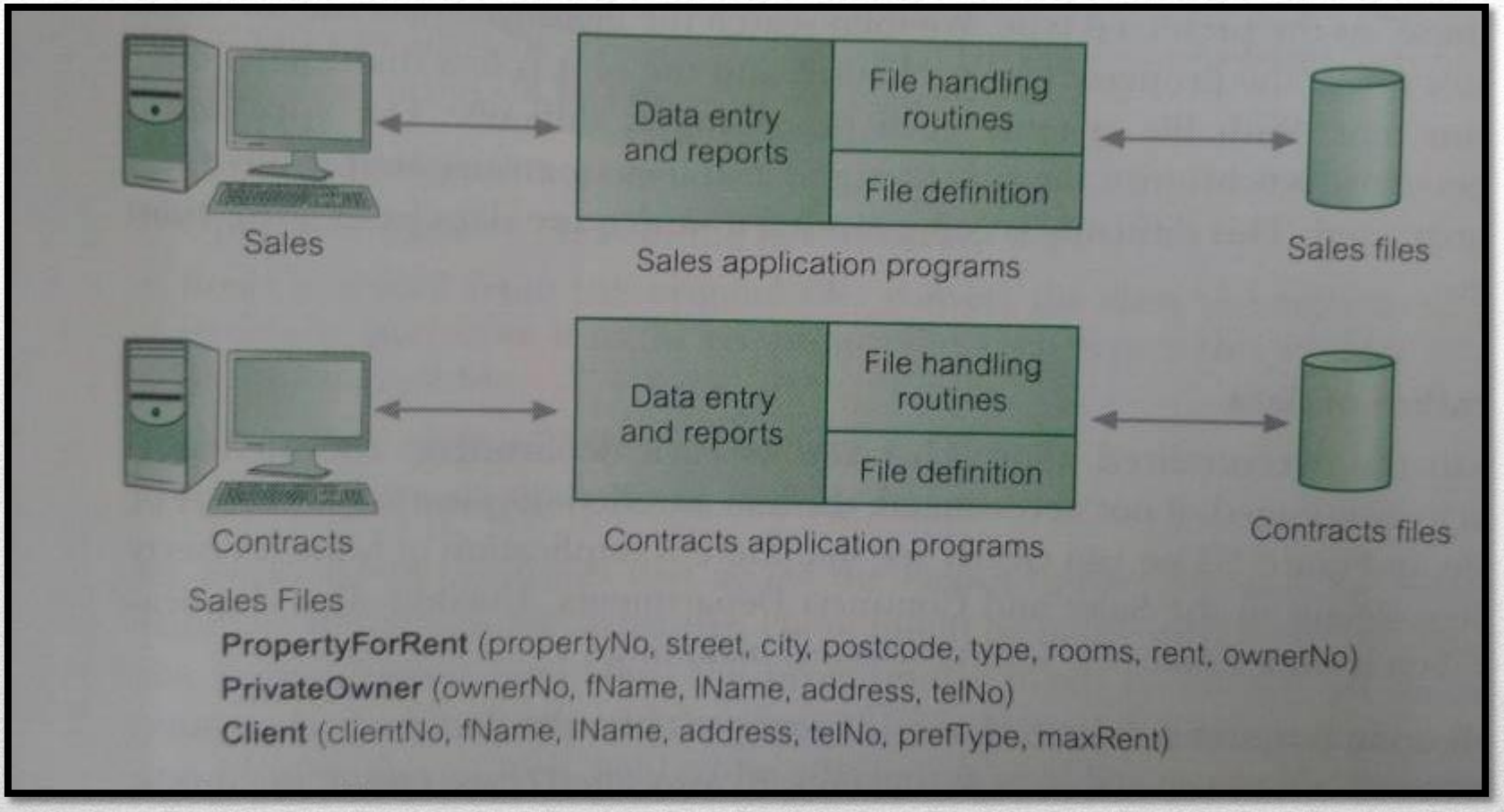

# Evolution of Database

File-base system were an early attempt to computerize the manual filing system.




# File-Based System




# Example 1 : File-Based System

# Database in Business World

Example of database encounter in daily life:

- Airline reservation
- Purchasing from supermarket
- Using local library
- Purchases from the supermarket
- Purchases using credit card

# Importance of DB in Life

# Filed-Based System VS Database System

| No | Differentiation | Filed-Based | Database |
|---|---|---|---|
| 1. | Controlling Data | Data inconsistency – when the same data is stored in multiple files, data inconsistency is inevitable. | Data consistency – by controlling data redundancy, data inconsistency eliminated. |
| 2. | Data Sharing | Limited data sharing – difficult to share data when different application create their own data files. | Unlimited data sharing- allows users from different department to share the corporate data according to their information needs. |

# Cont.. Filed-Based System VS Database System

| No | Differentiation | Filed-Based | Database |
|---|---|---|---|
| 3. | Integrated Data | All the data are not centralized and unintegrated | All the data are centralized and integrated |
| 4. | Data Dependence | To change the file structure, need to code, test and document all over again | The code and data descriptions (or file structured) are separated. The data description can change without having to change the code that operates on the data. |

# Cont.. Filed-Based System VS Database System

| No | Differentiation | Filed-Based | Database |
|---|---|---|---|
| 5. | Data Security | As the decentralized, it is not enough to have tight security in one department but no security in another department | As the centralized, it is relatively easy to protect the data against all kind of threats whether accidental or intentional. |
| 6. | Program Maintenance_ errors, enhancement, coding, testing and etc | Excessive program maintenance – all information systems need to be maintened. | Reduced program maintenance – is made easy in the database approach. |

# Cont.. Filed-Based System VS Database System

| No | Differentiation | File-Based | Database System |
|---|---|---|---|
| 7. | Data Redundancy | Uncontrolled data redundancy – each application (or department) has its own data. If another application or department needed similar data, the data need to re-entered all over again. | Data duplication/ replication is minimized |