

Q.3)

a) A single user database is a database that only one user will be able to access (read and write data into). One such example of it can be a database installed locally to learn SQL, to work on personal projects, may be track monthly expenditure, income & savings.

An example for a special purpose database can be for a chemistry lab to record the use of chemicals & record the experiments and store their outcomes.

b.) Structural dependency is considered a bad thing as a simple or a small change to the database schema (or) table shall force to change / modify all the records and tables. It basically compromises flexibility and reusability.  
Let's assume for example, consider a records of patients maintained in a file system. we have to depend on the number of bytes to skip before grabbing patient & doctor name. if the position changes, then we have to modify our code to pick the updated values which is a hassle.

c.) We have the following benefits by layered data abstraction.

- i) increased modularity - as we shall have a hierarchical structure it is easier to maintain the modules
- 2) Enhanced flexibility - As we can differentiate and put schema into different layers, it is easy to change one layer without impacting other layers.