**23k-0065  
Talha Rusman**

**Question 01:**

1. There are many problems with storing data in basic files, like duplicate data in multiple locations, weak security, difficulty sharing or sending data, fixed queries, and files that don't actually "respond" with one each other.  
   b) In this case, no single column functions on their own; instead, two or more columns are joined to create a unique identifier. For example, identifying an specific order item by combining Order\_ID and Item\_ID.   
     
   c) Applications act as a link between the database and users. They allow us to handle deals safely, define structures, modify data, and make sure only authorized people have access to specific data.

d) This is one that is difficult because it implies that we should be able to alter the conceptual schema (the overall design of the database) without impacting how users view the data. difficult to achieve because even minor design modifications can cause issues for programs or views that rely on the outdated framework.  
  
e) A super-key can be a set of features that, even if it contains extra information, uniquely identifies a record. The minimal set of characteristics needed is what is referred to as a key. Thus, all keys are super-keys, but not all super-keys are keys.