#39   Multiuser considerations

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Notes pertaining to 4th Dimension's multi user operation
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Several problems have been found in 4th Dimension's multiuser operations that could affect your database. These problems can be avoided by the following guidelines.

1. Don't delete records using "Clear" from the "Edit" menu in the user environment while in multiuser. If you do so 4th Dimension will not delete the records and an error will be generated.

2. Don't delete fields or files in Multiuser mode. When 4th Dimension deletes a field/file it renumbers all fields/files greater than the one being deleted. In muliuser mode, the renumbering process is incorrect. This is what causes 4th Dimension to incorrectly alter references to all fields/files that are greater than the one being deleted. Because of this, **it is strongly suggested that all design work be done in single user mode**.

3. If you have updated a copy of the database by replacing the .struct, .enum and .res files, always enter the database in single user, in the design environment, before entering in multiuser, otherwise all new procedures and layouts will not appear.

4. Do not use **APPLY TO SELECTION** to modify records in files in a READ/WRITE state. If **APPLY TO SELECTION** encounters a record that is in use by someone else, i.e. locked, it will simply ignore it. Instead, you should use a procedure similar to the one that follows:

```
DEFAULT FILE([File1])
While(Not(End Selection))
  LOAD RECORD
  While (Locked)
    $now:=Current time
    While ((Current time-$now)<10) `wait 10 seconds
      MESSAGE ("Waiting for record: "+[File1]Field)
    End while
    LOAD RECORD `check if status has changed
  End while
  myUpdateProc
End while
```

5. Do not use **DELETE SELECTION** while in multiuser mode.

4th Dimension Technical Note