**Part I: Power of COMMIT**  
1) Refer to Assgn9out.txt  
2) Refer to Assgn9out.txt  
 **What is result of select? Explain.**  
  
 Ans: Select statement returns an empty set, because with   
 Start Transaction; command auto-commit remains disabled until you end   
 the transaction with commit or rollback. The autocommit mode then   
 reverts to its previous state.   
 So, insert query in the first mysql session was not auto committed and  
 hence results were not visible from the second mysql session.  
  
3) Refer to Assgn9out.txt  
4) Refer to Assgn9out.txt  
 **What is result of select? Explain.**  
 Ans: Select statement returns 2 rows in a set

|  |  |
| --- | --- |
| tempNo | tempName |
| 1 | T1 |
| 2 | T2 |

After the COMMIT command was issued in the first session the changes   
(insert into table) to all involved tables (tempTable) takes effect and   
 so is visible now.  
 So, when we execute select query now we can see the inserted records.  
  
**Part II: Power of Rollback**  
  
1) Refer to Assgn9out.txt  
 **What is result of select? Explain.**  
Ans: Select statement returns 1 row in a set

|  |  |
| --- | --- |
| tempNo | tempName |
| 2 | T2 |

Delete statement acquires an exclusive lock for the row. Delete from is   
 not transaction safe. So, when we select we see the record deleted  
  
2) Refer to Assgn9out.txt  
 **what is result of select? Expla**in  
Ans: Select statement returns 2 rows in a set

|  |  |
| --- | --- |
| tempNo | tempName |
| 1 | T1 |
| 2 | T2 |

Rollback statement cancels all modifications made by the current transaction.  
So, we rollback and select the deletion is undone and we can see the unmodified data set  
  
**Part III: Be Aware of Deadlock  
  
Explain what happened.**And: ERROR 1213 (40001): Deadlock found when trying to get lock; try restarting transaction

🡪First session begins a transaction (*start transaction*).   
🡪Within the transaction, first session obtains an ***exclusive(x)*** lock for updating row (*update tempTable set tempName = 'T11' where tempNo=1;*).  
🡪Next, second session begins a transaction (*start transaction)* and attempts to update next row from the table(*update tempTable set tempName= 'T22' where tempNo = 2;*).  
🡪Next, first session again tries to update(*update tempTable set tempName = 'T21' where tempNo= 2;*) and tries to obtain an x lock on the table but can not as it is already in queue.  
🡪Deadlock occurs here because again second session needs an ***X*** lock to update the row(*update tempTable set tempName = 'T12' where tempNo = 1;*).   
🡪However, that lock request cannot be granted because first session already has an ***X*** lock.   
🡪As a result, InnoDB generates an error for one of the clients and releases its locks. The client returns this error: ERROR 1213 (40001): Deadlock found when trying to get lock; try restarting transaction