1.

| **Time** | **Session1** | **Output1** | **Session2** | **Output2** |
| --- | --- | --- | --- | --- |
| t0 | SET TRANSACTION NAME 'HW1'; | Transaction NAME succeeded. |  |  |
| t1 | Update tbl\_accounts set balance=balance+79 where accid=1169; | 1 row updated. |  |  |
| t2 | Select \* from tbl\_accounts; | 1169 7429  1170 8900.46 | Select \* from tbl\_accounts; | 1169 7350  1170 8900.46 |
| t3 | Commit; | Commit complete. |  |  |
| t4 | Select \* from tbl\_accounts; | 1169 7429  1170 8900.46 | Select \* from tbl\_accounts; | 1169 7429  1170 8900.46 |

Why the result is difference at time t2: Because Session1 haven’t commited at that time

Is the data at time t4 still difference? Why? No because session 1 commited

2.

| **Time** | **session** | **output** |
| --- | --- | --- |
| t0 | select \* from tbl\_accounts;; | 1169 7350  1170 8900.46  1175 679.5  1177 400000 |
| t1 | begin decAccount; end | ORA-02290: check constraint (PDB5USER.SYS\_C007640) violated  ORA-06512: at "PDB5USER.DECACCOUNT", line 6  ORA-06512: at "PDB5USER.DECACCOUNT", line 6  ORA-06512: at line 1  02290. 00000 - "check constraint (%s.%s) violated"  \*Cause: The values being inserted do not satisfy the named check    \*Action: do not insert values that violate the constraint. |
| t2 | select \* from tbl\_accounts; | 1169 7350  1170 8900.46  1175 679.5  1177 400000 |

Compare data at time t0 and t2. Why is the data not difference: Because violated constraints happened so there was a rollback

3.

| **Time** | **session** | **output** |
| --- | --- | --- |
| t0 | select \* from tbl\_accounts; | 1169 7350  1170 8900.46  1175 679.5  1177 400000 |
| t1 | begin decAccount; end; | Error report -  ORA-02290: check constraint (PDB5USER.SYS\_C007641) violated  ORA-06512: at "PDB5USER.DECACCOUNT", line 6  ORA-06512: at "PDB5USER.DECACCOUNT", line 6  ORA-06512: at line 1  02290. 00000 - "check constraint (%s.%s) violated"  \*Cause: The values being inserted do not satisfy the named check    \*Action: do not insert values that violate the constraint. |
| t2 | select \* from tbl\_accounts; | 1169 6350  1170 7900.46  1175 679.5  1177 400000 |

Why is the data at time t0 and t2 difference? Violated constraints happened but each iterator commit so there is still change made afterwards instead of rolling back all changes after occurring violated constraints