**Assignment 3 Solution**

**1.a**

T1

Lock and unlock instructions:

lock-S(A)

read(A)

lock-X(B)

read(B)

if A = 0

then B := B + 1

write(B)

unlock(A)

unlock(B)

T2

lock-S(B)

read(B)

lock-X(A)

read(A)

if B = 0

then

A := A + 1

write(A)

unlock(B)

unlock(A)

**1.b**

|  |  |
| --- | --- |
| T1  lock-S(A)  read(A)  lock-X(B) | T2  lock-S(B)  read(B)  lock-X(A) |

**2.**

T0 and T2 will be rollbacked

T1 will be committed