

## Practical 4

5.2) The record with the name 'Tom' is the only one that can be added to the table. The record 'Dave' and 'Bob' cannot be added because Dave's student-ID is the same as 'David's student-ID and the primary key are unique values, and Bob cannot be added because the Student-ID is null and primary key are mandatory.

5.8)

UserID	Table	Grantor	READ	INSERT	DELETE
X	Employee	A	15	15	-
X	Employee	B	-	-	-
Y	Employee	X	25	25	25
X	Employee	C	-	-	-

We assume:

- If the user has a privilege that was granted by multiple users, the privilege is retained as long as at least one of those is still valid.
- X still has the READ privilege from A, so Y retains the READ privilege.
- X still has the INSERT privilege from A, so Y retains the READ privilege.
- X still has the DELETE privilege from C, so Y retains the READ privilege.
- X has the necessary privileges from A and C to allow Y to retain the granted privileges.

5.9) A->B(t=10)

A->C(t=40)

C->D(t=60)

After the revocation, C's dependency on B is removed but C still has access rights from A, so therefore D still retains its privileges from C.

- Breakdown: A grants access to C and B, C grants to D.