2.

b.

When we change Franklin Wong’s SSN to 99996666, the Mgr\_ssn field that has the ssn of Franklin Wong in DEPARTMENT will be changed to 99996666. Along with that, in the Essn in WORK\_ON, the field that contains the ssn of Franklin Wong will be changed to 99996666. The Essn of all Franklin Wong’s DEPENDENT will also be changed to 99996666. Finally, the Super\_ssn of all EMPOYEE that Franklin Wong manages will be changed to 99996666.

c.

To delete James Borg, we need to update table DEPARTMEMT and EMPLOYEE so that Mrg\_ssn and Super\_ssn can accept null value. After deleting the record that contains James Borg, we will see that the value of Super\_ssn of people, who has James Borg as their supervisor, be set to null. Along with that, the value of Mgr\_ssn of Department, where has James Borg as manager, will also be set to null.

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ii.

σ Dname='Research' ∧ salary>30000 ∧ (pname='Computerization' ∨ pname='Reorganization')((((π ssn, Lname, Address (EMPLOYEE)) ⋈Dno=dnumber(DEPARTMENT)) ⋈ssn=essn(WORKS\_ON)) ⋈pno=pnumber(PROJECT))

RESULT1 <- (EMPLOYEE) ⋈Dno=dnumber(DEPARTMENT)

RESULT2 <- RESULT1 ⋈Dno=dnumber