CSE370

Assignment 2

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Ans to Q 1

a) Violation of key constraint.

No two tuples in a relation must have the same value for the key attribute(s). Since <'1', 'Houston'> is already present in the relation and both are key attributes, it violates key constraint.

b) Violates referential integrity.

The value in foreign key column can be either NULL or a values that already exists in primary key of referenced relation.

Here, Dnumber is a foreign key and the number 2 doesn't exist in DEPARTMENT relation's primary key Dnumber. Hence it violates referencial integrity.

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© Violates Entity integrity

The primary key(s) cannot have NULL values. Here both the attributes combined, hence we cannot insert NULL.

(d) No violation as dno in Department table '4' already exists. So this foreign key can have '4' as a value

(e) Violation of referential integrity:

The dno is the foreign key in EMPLOYEE relation and the referenced relation table DEPARTMENT doesn't have dnumber existing as '2'. Hence it violates referential integrity.

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(f) Violates key constraint.

The value '20' already exists in the primary key Pnumber of PROJECT relation. Additionally, if we were to add this value, the foreign key of this relation on WORKS ON relation would not be able to identify it properly.

(g) Violates referencial integrity:

Here, Pnumber of PROJECT is primary key and B00 the foreign key Pno of WORKSON is referenced to this. If we delete any Pnumber, an already existing match of it will cause violation in the WORKS ON relation.

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(h) Violation of referential integrity :

Similarly, Dnumber is referenced Primary key of 3 relations. Changing / Deleting any value can cause violation.

(i) There will be no violation as we are deleting column, not rows. Also Bdate is a normal attribute.

(j) Violates referencial integrity :

The SSN is use as a reference primary key in other ~~entities~~ relations for which deleting a row will create violation of referencial integrity.