# National University of Computer and Emerging Sciences, Lahore Campus

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| **Course:**<br>**Program:**<br>**Instructor:** | Database Systems<br>BS(Computer Science)<br>Muhammad Ishaq Raza | |
| **Practice Problem:** | Relational Model (3) | |

Consider the following relational database state. Primary keys (PKs) are underlined and foreign keys (FKs) are in *italic* font. Assume referential integrity constraint(RIC) on FKs (Sites.*ownerID* and Entries.*siteID*) are ON DELETE CASCADE and ON UPDATE SET NULL.

**Users**

| userID | popularity | name |
|---|---|---|
| 23 | 4 | Isbah |
| 31 | 1 | Izaan |
| 13 | 4 | Tahreem |
| 22 | 5 | Khadija |

**Sites**

| siteID | siteName | ownerID | viewCount |
|---|---|---|---|
| 3 | FAN | 22 | 200 |
| 5 | W3Schools | 13 | 400 |
| 6 | Online DB | 22 | 300 |
| 8 | SQL Guru | 23 | 250 |

**Entries**

| entryID | siteID | rating | createdDate | tag |
|---|---|---|---|---|
| 1 | 3 | 5 | 2018-05-11 | BP |
| 2 | 3 | 10 | 2018-08-11 | Views |
| 3 | 5 | 15 | 2018-05-11 | |
| 4 | 8 | 10 | 2018-07-11 | |
| 5 | 6 | 19 | 2018-05-11 | FR |
| 6 | 8 | 4 | 2018-05-17 | Views |

**Q.** Apply following operations on the above database. State if the operation would be carried out successfully or not. **Explain your answer briefly.** In case of successful operation indicate the changes that will be made to the above database and in case of Reject state the error that occurred. Please note that all operations are independent.

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**a.** UPDATE users SET userID=55 WHERE popularity=4;

Accept ○          **Explain:**

Reject ○

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**b.** UPDATE entries SET siteID = 1 WHERE rating=10;

Accept ○          **Explain:**

Reject ○

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**c.** DELETE FROM entries WHERE siteID=3;

Accept ○          **Explain:**

Reject ○

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**d.** DELETE FROM sites WHERE ownerID=22

Accept ○          **Explain:**

Reject ○

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**e.** INSERT INTO entries VALUES (6,7 ,5, 2012-05-11, 115);

Accept ○          **Explain:**

Reject ○

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