**DATA ANOMALIES**

**#creating flat files/ unnormalized data**

**create** **table** wicc (prof\_id **smallint** **primary** **key**,

prof\_name **varchar** **not** **null**,

dept **varchar** **not** **null**,

course\_group **varchar** **not** **null**);

**drop** **table** wicc;

**insert** **into** wicc **values** (1 , 'Bibek', 'Project', 'sec A'),

(2 , 'Rojeena', 'Product', 'sec B'),

(3 , 'Santosh', 'Finance', 'sec C'),

(4 , 'Santosh', 'Finance', 'sec C'),

(5 , 'Kushal', 'HR', 'sec D'),

(6 , 'Kushal', 'HR', 'sec E');

**select** \* **from** wicc;

**drop** **table** wicc;

#Insertion Anomalies:

**For** example suppose **any** professor **is** hired but **not** **immediately** assigned **any** course **group** **or** **any** department may **not** **get** his/her place

**in** such **type** **of** flat **database** mentioned above, we cannot **insert** **values** **if** **null** entries **are** **not** allowed **in** the **database**.

So **in** the **case** mentioned above removing such **type** **of** problems requires splitting **of** the **database** which **is** done **by** normalization.

**insert** **into** wicc **values** (7,'Sanam');

#**update** Anomalies:

**In** the above **table** the department assigned **to** Kushal **is** an error because it needs **to** be updated **at** two different place **to** maintain consistency.

**update** wicc **set** dept='UI/UX' **where** course\_group='Sec D' **and** prof\_name='Kushal';

**select** \* **from** wicc;

#Deletion Anomalies:

**In** the above **table** **if** **Section** B **is** **to** be deleted **then** un-necessarily Rojeena’s detail has **to** be deleted.

So normalization **is** generally done **before** deleting **any** record **from** a flat **database**.

**delete** **from** wicc **where** course\_group ='Sec B' **and** dept='Product';

**select** \* **from** wicc;