6/10/20
TASK: 8 Normalizing database using
dunctional dependencies upto BCNF
Aim:
To Noomalize database wring functional dependencies upto BCNT
Haspital Database:
1. Identify haspital abribules:
Patient_ID, Patient_Name, Doctor _ IDS Patient_ID, Patient_Name, Doctor _ IDS Patient_ID, Patient_Name, Doctor _ IDS Total
-ment, Bill - Amount.
-ment, Bill - Homount. 2. Define relational Schema: Hospital (patient - ID, Patient - Name, Doctor-I) Doctor-Name, pepartment, Room No, T greatment pill pomount 2
Hospital (patient - ID, parient - No. T greatment, ROOM_NO, T greatment
Bill Amount) denendencier (FDs)
Defermin e functional dependencier (FDS)
Defermine functional dependencier (FDS) between attribute; patient_ID -> Postient _ Name, podon_ID, Root_V2, rated_ID -> Postient _ Name, podon_ID, Root_V2, Treatment, Bill_Amount Treatment, podon_ pepart ment
patient_ID -> Parent Bill_Amount
Doctor ID -> Doctor Name , pepart ment
ROOM - NO -> repertment
ROOM - N
Step 2: Convert to INF
e fiminate grepeating give
2. Great e sepenal e dables four each enepeating group l
siepeating group

Step 3: Convert to 2NF: 1. Ensure each non-key addibute depends on the entire polimary key. 2. Move non-key alloubutes to sepender tables if they depend only part of the polimary key. · Oreate Dodon table: podon (pocton-In Doctor - Name, repartment)
- Oreate patient fable: Palient (Patient - In) patient_Name, nodon_ID RooM_No, Treatment, Bill-Amand Step 4: Convert to 3NF 1. Ensure there are no bransitive dependencies. 2 move non-key attributes to sperate tables it they depend on another pon-key attribute · Breafe Room fable: Room (Room_Ne) · undate boton table: podon (podon_In, podon_Name). deps: convert to BCNF 1. From every determinant to a Cardidate Key 2. check for overlapping Condidate Key 3. perompose supposition to eliminate suedud aray.

No horther decomposition needad

wring Crownblith fool: 1. Input relation schema and functional dependencia 2 Ovidith fool generates a dependency 3. Analyze the graph to identify
pormalization issues

4. Apply normalization rules to transform

11.0 ml the Schema 5. vorify the nexulting schema meets BCNF Giferia Coristith tool seteps. 1. Orecite a new project in avistisse Define the relational 3 chemic and Fis 3. Run the "nependency Curaph" fool.
4. Analyze the growth for normalization
issues
6. Apply frankformation using the n Novimalize " tool. b. Verify BUNF Compliana cusing the Normalized Schama: Profient (Patient_ID), Patient_Name, no do n_ID ROOM = No, Inentment, Bill Amount Dodon (Daton _ ID, Dodon - Nam 0). 3-RaoM (Koom_No, pepartment).

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EX No.	-05
PERFORMANCE (5)	6
RESULT AND ANALYSIS (5)	ATOMO
VIVA VOCE (5)	The state of the s
RECORD (5)	No. of the last of
TOTAL (20)	The same of the sa
CONTACTH DATE	trolog

Result:

Thus the National dependencies upto
BCNF executed successfully.