

RXIT(studid, name, stud_progid, cpi, prog_name, intake, prog_did, dname).

F

key: studid

$did^+ = did, dname$

$X \rightarrow Y \rightarrow$

$\checkmark R1(did, dname) X^+$
 $R2(studid, name, progid, pname, cpi, intake, did)$

did \rightarrow dname	studid \rightarrow cpi
progid \rightarrow pname	studid \rightarrow progid \checkmark
progid \rightarrow did	studid \rightarrow pname \checkmark
progid \rightarrow dname	studid \rightarrow intake \checkmark
progid \rightarrow intake	studid \rightarrow did \checkmark
studid \rightarrow name	studid \rightarrow dname \checkmark

f1

\Uparrow

f2

$did \rightarrow dname$

$pid \rightarrow pname$

is R1 in BCNF?

Yes

is R2 in BCNF?

NO

Key: ~~studid~~ sid
 $pid^+ = pid, pname, intake, did$

$R21(pid, pname, intake, did) BCNF$
 $R22(sid, name, cpi, pid) BCNF$

Key: did
 f21 f21
 $pid \rightarrow pname$
 $pid \rightarrow intake$
 $pid \rightarrow did$
 pid

f22
 $sid \rightarrow name$
 $sid \rightarrow cpi$
 $sid \rightarrow pid$
 sid

$pid \rightarrow did$
 $pid \rightarrow intake$
 $sid \rightarrow name$
 $sid \rightarrow cpi$
 $sid \rightarrow pid$
 $sid \rightarrow pname$
 $sid \rightarrow intake$
 $sid \rightarrow did$

Feine
 lost

Team(TeamID, TeamPWD, MentorID, InstID)

TeamID \rightarrow TeamPWD

TeamID \rightarrow MentorID

TeamID \rightarrow InstID ✓

Transitive

~~MentorID~~ \rightarrow InstID ✓

~~Key: TeamID~~

~~BeNF: yes~~

BeNF: yes/NO

~~Key~~

~~MentorID~~ $\xrightarrow{+}$ (MentorID, InstID)
R1

R2(TeamID, PWD, MentorID)

R (ISBN, Title, Price, PubId, author)

{ ISBN \rightarrow Title
ISBN \rightarrow Price
ISBN \rightarrow PubId

Normal form : 1NF

Key : { ISBN, Author }

ISBN⁺ =

R1 (ISBN, Title, Price, PubId)

R2 (author, ISBN)