Normalization Proofs

Users : **{User_ID , User_Name , First_Name, Middle_Name, Last_Name, DOB, Phone No, Address, Email_ID , City , Country , Headline , Registration_Date }**		
User_ID	→	User_Name
User_ID	→	First_Name
User_ID	→	Middle_Name
User_ID	→	Last_Name
User_ID	→	DOB
User_ID	→	Phone_No
User_ID	→	Address
User_ID	→	Email_ID
User_ID	→	City
User_ID	→	Country
User_ID	→	Headline
User_ID	→	Registration_Date

Candidate key **: -** {User_ID,Phone_No, Email_ID}

Primary key : - User_ID

Type of normal form : - BCNF

Reason : - For every Functional Dependencies A → B that holds on this relation, A is a super key. So we can say that this relation is in BCNF.

Institute: **{Institute_ID , Institute_Name, City, Country, About}**		
Institute_ID	→	Institute_Name
Institute_ID	→	City
Institute_ID	→	Country
Institute_ID	→	About

Candidate key **: -** Institute_ID

Primary key : - Institute_ID

Type of normal form : - BCNF

Reason : - For every Functional Dependencies A → B that holds on this relation, A is a super key. So we can say that this relation is in BCNF.

Education : **{Education_ID, User_ID, Institute_ID, Degree , Grade, Start_Date , End_date, Field_Of_Study, Description }**		
Education_ID	→	User_ID
Education_ID	→	Institute_ID
Education_ID	→	Degree
Education_ID	→	Grade
Education_ID	→	Start_Date
Education_ID	→	End_Date
Education_ID	→	Field_Of_Study

Education_ID	→	Description

Candidate key **: -** Education_ID

Primary key : - Education_ID

Type of normal form : - BCNF

Reason : - For every Functional Dependencies A → B that holds on this relation, A is a super key. So we can say that this relation is in BCNF.

Company: **{CIN_No , Company_Name, Hiring_Status, City, State, About }**		
CIN_No	→	Company_Name
CIN_No	→	Hiring_Status
CIN_No	→	City
CIN_No	→	State
CIN_No	→	About
Company_Name	→	CIN_No
Company_Name	→	Hiring_Status
Company_Name	→	City
Company_Name	→	State
Company_Name	→	About

Candidate key **: -** CIN_No, Company_Name

Primary key : - CIN_No

Type of normal form : - BCNF

Reason : - For every Functional Dependencies A ⟶ B that holds on this relation, A is a super key. So we can say that this relation is in BCNF.

Company_Followers : **{ User_ID , CIN_No }**		
{ User_ID , CIN_No }	⟶	User_ID
{ User_ID , CIN_No }	⟶	CIN_No

Candidate key **: -** { User_ID , CIN_No }

Primary key : - { User_ID , CIN_No }

Type of normal form : - BCNF

Reason : - For every Functional Dependencies A ⟶ B that holds on this relation, A is a super key. So we can say that this relation is in BCNF.

Looks_For: **{User_ID,Job_Role,CIN_No}**		
{User_ID,Job_Role,CIN_No}	⟶	User_ID
{User_ID,Job_Role,CIN_No}	⟶	Job_Role
{User_ID,Job_Role,CIN_No}	⟶	CIN_No

Candidate key **: -** {User_ID,Job_Role,CIN_No}

Primary key : - {User_ID,Job_Role,CIN_No}

Type of normal form : - BCNF

Reason : - For every Functional Dependencies A ⟶ B that holds on this relation, A is a super key. So we can say that this relation is in BCNF.

Experience : **{Experience_ID , User_ID , CIN_No , Experience_Field , Start_Date , End_Date , Description }**		
Experience_ID	→	User_ID
Experience_ID	→	CIN_No
Experience_ID	→	Experience_Field
Experience_ID	→	Start_Date
Experience_ID	→	End_Date
Experience_ID	→	Description

Candidate key **: -** Experience_ID

Primary key : - Experience_ID

Type of normal form : - BCNF

Reason : - For every Functional Dependencies A → B that holds on this relation, A is a super key. So we can say that this relation is in BCNF.

Skill: **{ Skill_Name }**		
Skill_Name	→	Skill_Name

Candidate key **: -** Skill_Name

Primary key : - Skill_Name

Type of normal form : - BCNF

Reason : - For every Functional Dependencies A ⟶ B that holds on this relation, A is a super key. So we can say that this relation is in BCNF.

Skill_From_Edu: **{ Education_ID , Skill_Name }**		
{ Education_ID , Skill_Name }	⟶	Education_ID
{ Education_ID , Skill_Name }	⟶	Skill_Name

Candidate key **: -** { Education_ID , Skill_Name }

Primary key : - { Education_ID , Skill_Name }

Type of normal form : - BCNF

Reason : - For every Functional Dependencies A ⟶ B that holds on this relation, A is a super key. So we can say that this relation is in BCNF.

Skill_From_Exp: **{ Experience_ID , Skill_Name }**		
{ Experience_ID , Skill_Name }	⟶	Experience_ID
{ Experience_ID , Skill_Name }	⟶	Skill_Name

Candidate key **: -** { Experience_ID , Skill_Name }

Primary key : - { Experience_ID , Skill_Name }

Type of normal form : - BCNF

Reason : - For every Functional Dependencies A ⟶ B that holds on this relation, A is a super key. So we can say that this relation is in BCNF.

User_Skill: **{ Skill_Name, User_ID}**		
{ Skill_Name, User_ID}	⟶	User_ID
{ Skill_Name, User_ID}	⟶	Skill_Name

Candidate key **: -** {Skill_Name, User_ID}

Primary key : - {Skill_Name, User_ID}

Type of normal form : - BCNF

Reason : - For every Functional Dependencies A ⟶ B that holds on this relation, A is a super key. So we can say that this relation is in BCNF.

Skill_Endrosed_By: **{ Skill_Name, User_ID,Endrosed_From}**		
{ Skill_Name, User_ID , Endrosed_From}	⟶	User_ID
{ Skill_Name, User_ID , Endrosed_From}	⟶	Skill_Name
{ Skill_Name, User_ID , Endrosed_From}	⟶	Endrosed_From

Candidate key **: -** { Skill_Name, User_ID , Endrosed_From}

Primary key : - { Skill_Name, User_ID , Endrosed_From}

Type of normal form : - BCNF

Reason : - For every Functional Dependencies A ⟶ B that holds on this relation, A is a super key. So we can say that this relation is in BCNF.

<u>Offered_Jobs</u>: **{Job_Role , CIN_No, Job_Description, Vacancy, Last_Date_To_Apply }**		
{Job_Role, CIN_No}	⟶	Job_Description
{Job_Role, CIN_No}	⟶	Vacancy
{Job_Role, CIN_No}	⟶	Last_Date_To_Apply

Candidate key **: -** {Job_Role, CIN_No}

Primary key : - {Job_Role, CIN_No}

Type of normal form : - BCNF

Reason : - For every Functional Dependencies A ⟶ B that holds on this relation, A is a super key. So we can say that this relation is in BCNF.

<u>Group</u>: **{Group_ID,Group_Name }**		
Group_ID	⟶	Group_Name

Candidate key **: -** Group_ID

Primary key : - Group_ID

Type of normal form : - BCNF

Reason : - For every Functional Dependencies A ⟶ B that holds on this relation, A is a super key. So we can say that this relation is in BCNF.

Group_Member: **{Group_ID,User_ID,Is_Leader }**		
{Group_ID,User_ID}	⟶	Is_Leader

Candidate key **: -** {Group_ID,User_ID}

Primary key : - {Group_ID,User_ID}

Type of normal form : - BCNF

Reason : - For every Functional Dependencies A ⟶ B that holds on this relation, A is a super key. So we can say that this relation is in BCNF.

Post: **{Post_ID, User_ID, Created_Date, Updated_Date, Description}**		
Post_ID	⟶	User_ID
Post_ID	⟶	Created_Date
Post_ID	⟶	Updated_Date
Post_ID	⟶	Description

Candidate key **: -** Post_ID

Primary key : - Post_ID

Type of normal form : - BCNF

Reason : - For every Functional Dependencies A ⟶ B that holds on this relation, A is a super key. So we can say that this relation is in BCNF.

Comment: **{Comment_ID, Post_ID, User_Id, Description,Commented_Date,Updated_Date}**		
Comment_ID	⟶	Post_ID
Comment_ID	⟶	User_Id
Comment_ID	⟶	Description
Comment_ID	⟶	Commented_Date)
Comment_ID	⟶	Updated_Date

Candidate key **: -** Post_ID

Primary key : - Post_ID

Type of normal form : - BCNF

Reason : - For every Functional Dependencies A ⟶ B that holds on this relation, A is a super key. So we can say that this relation is in BCNF.

Certificates: **{Credential_ID , Certififcate_Name, Issue_Date, Issue_Org, Experience_Date }**		
Credential_ID	⟶	Certificate_Name
Credential_ID	⟶	User_ID
Credential_ID	⟶	Issue_Date
Credential_ID	⟶	Issue_Org
Credential_ID	⟶	Experience_Date

Candidate key **: -** Credential_ID

Primary key : - Credential_ID

Type of normal form : - BCNF

Reason : - For every Functional Dependencies A ⟶ B that holds on this relation, A is a super key. So we can say that this relation is in BCNF.

<u>Request</u>: **{Sent_By_UID , Sent_To_UID, Sent_Date , Status}**		
{ Sent_By_UID , Sent_To_UID }	⟶	Sent_Date
{ Sent_By_UID , Sent_To_UID }	⟶	Status

Candidate key **: -** { Sent_By_UID , Sent_To_UID }

Primary key : - { Sent_By_UID , Sent_To_UID }

Type of normal form : - BCNF

Reason : - For every Functional Dependencies A ⟶ B that holds on this relation, A is a super key. So we can say that this relation is in BCNF.