EMPLOYEES

first name	last name	dateof birth	adresss	city	province	country	postal code	email	phoen	SSN	postion	citizenship	company ID	salary	start date	end date
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q

(N,K,L) --> ABCDEFGHIJMNOP
(N,K,L)† = ABCDEFGHIJKLMNOPQ

looking at the FD we can see that it is not a trivial FD so it does not satisfy the first condition of 3NF
therefore (N,K,L) is candidate key and super key therefore we can say that it is in 3NF and because it satisfied this candition therefore it is in BCNF also.

Pharma company

id	name
A	B

A --> B
(A)† = AB

looking at the FD we can see that it is not a trivial FD so it does not satisfy the first condition of 3NF
therefore (A) is candidate key and super key therefore we can say that it is in 3NF and because it satisfied this candition therefore it is in BCNF also.

TEAMS:

Team name	team ID	project ID
A	B	C

B --> AC
(B)† = ABC

looking at the FD we can see that it is not a trivial FD so it does not satisfy the first condition of 3NF
therefore (A) is candidate key and super key therefore we can say that it is in 3NF and because it satisfied this candition therefore it is in BCNF also.

projects:

Project ID	name	start date	end date
A	B	C	D

A --> BCD
(A)† = ABCD

looking at the FD we can see that it is not a trivial FD so it does not satisfy the first condition of 3NF
therefore (A) is candidate key and super key therefore we can say that it is in 3NF and because it satisfied this candition therefore it is in BCNF also.

head office:

CEO SSN	website	email	id
A	B	C	D

D --> ABC
(D)† = ABCD

looking at the FD we can see that it is not a trivial FD so it does not satisfy the first condition of 3NF
therefore (D) is candidate key and super key therefore we can say that it is in 3NF and because it satisfied this candition therefore it is in BCNF also.

Facilities:

id	owners id	name	address	city	postal code	province	country	phone number	type
A	B	C	D	E	F	G	H	I	J

A --> BCDEFGHIJ
(A)† = ABCDEFGHIJ

looking at the FD we can see that it is not a trivial FD so it does not satisfy the first condition of 3NF
therefore (A) is candidate key and super key therefore we can say that it is in 3NF and because it satisfied this candition therefore it is in BCNF also.

warehouse

id	Maximum capacity
A	B

A --> B
(A)† = AB

looking at the FD we can see that it is not a trivial FD so it does not satisfy the first condition of 3NF
therefore (A) is candidate key and super key therefore we can say that it is in 3NF and because it satisfied this candition therefore it is in BCNF also.

Manufacturing facility

Id	Maximum production capacity
A	B

A -->B
(A)† = AB

looking at the FD we can see that it is not a trivial FD so it does not satisfy the first condition of 3NF
therefore (A) is candidate key and super key therefore we can say that it is in 3NF and because it satisfied this candition therefore it is in BCNF also.

clients:

id	client name	contact name	address	city	country	province	postal code	email	phone number
A	B	C	D	E	F	G	H	I	J

A --> BCDEFGHIJ
(A)† = ABCDEFGHIJ

looking at the FD we can see that it is not a trivial FD so it does not satisfy the first condition of 3NF
therefore (A) is candidate key and super key therefore we can say that it is in 3NF and because it satisfied this candition therefore it is in BCNF also.

PRODUCTS

UPC	id	name	weight	price	volume	status	description
A	B	C	D	E	F	G	H

A --> BCDEFGH
(A)† = ABCDEFGH

looking at the FD we can see that it is not a trivial FD so it does not satisfy the first condition of 3NF
therefore (A) is candidate key and super key therefore we can say that it is in 3NF and because it satisfied this candition therefore it is in BCNF also.

Purchase

id	quantity	unit price
A	B	C

A --> BC
(A)† = ABC

looking at the FD we can see that it is not a trivial FD so it does not satisfy the first condition of 3NF
therefore (A) is candidate key and super key therefore we can say that it is in 3NF and because it satisfied this candition therefore it is in BCNF also.

contract

ID	COMPANY ID	client ID	position	account manager SSN	client name	delivery date	contract date
A	B	C	D	E	F	G	H

A --> BCDEFGH
(A)† = ABCDEFGH

looking at the FD we can see that it is not a trivial FD so it does not satisfy the first condition of 3NF
therefore (A) is candidate key and super key therefore we can say that it is in 3NF and because it satisfied this candition therefore it is in BCNF also.

job Position

position ID	jobTitle
A	B

A--> B
(A)† = AB

looking at the FD we can see that it is not a trivial FD so it does not satisfy the first condition of 3NF
therefore (A) is candidate key and super key therefore we can say that it is in 3NF and because it satisfied this candition therefore it is in BCNF also.

Research Center

Facility ID	typeofResearch
A	B

A --> B
(A)† = AB

looking at the FD we can see that it is not a trivial FD so it does not satisfy the first condition of 3NF
therefore (A) is candidate key and super key therefore we can say that it is in 3NF and because it satisfied this candition therefore it is in BCNF also.

researchAssignment

project ID	company ID	researcher_SSN	position	startDate	endDate	totalHours
A	B	C	D	E	F	G

ABCD --> EFG
(ABCD)† = ABCDEFG

looking at the FD we can see that it is not a trivial FD so it does not satisfy the first condition of 3NF
therefore (ABCD) is candidate key and super key therefore we can say that it is in 3NF and because it satisfied this candition therefore it is in BCNF also.