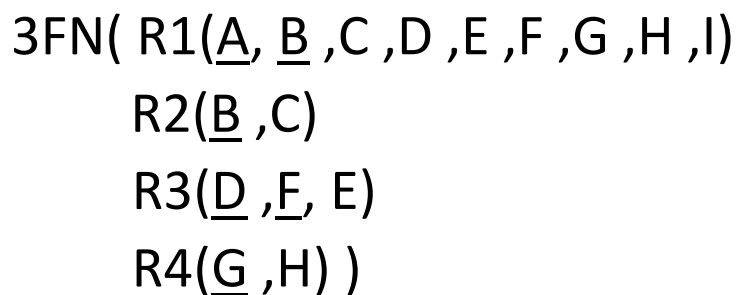
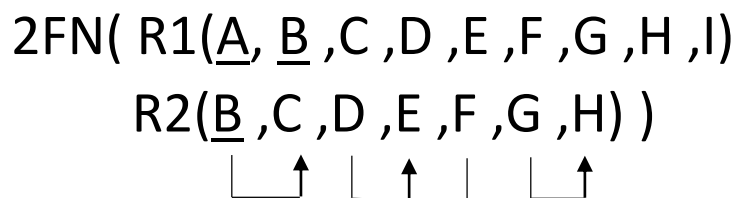
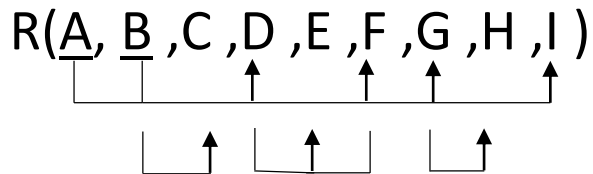


Guião 8 P1G12

8.1

a) Está na 1FN porque não possui atributos multi-valor, nem relações dentro de relações. Está na 1FN e não na 2FN/3FN porque existem dependências parciais.

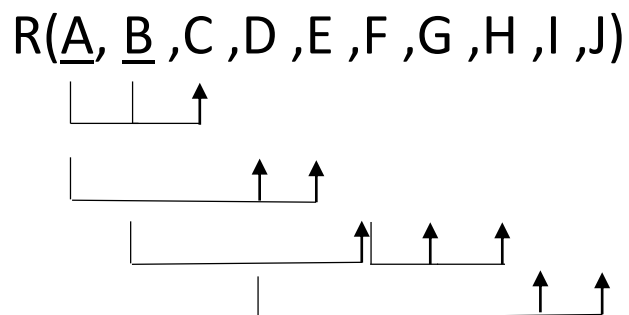
b)




8.2

a) Chaves = {A,B}

b)



2FN(R1(A,B ,C)
R2(A, D ,E)
R3(B ,F ,G ,H, D ,I , J))

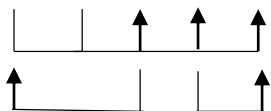


c)

3FN(R1(A, B ,C)
R2(A, D ,E)
R3(B, F)
R4(E, G, H)
R5(D, I, J))

8.3


R(A ,B ,C ,D ,E)



a) Chaves = {A,B}

b)

2FN(R1(A ,B ,C ,D ,E))

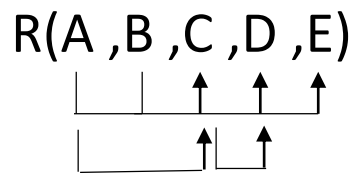


3FN(R1(A ,B ,C ,D , E)
R2(C ,A)
R3(D ,E))

c)

BCN(R1(B ,C ,D)
R2(C ,A)
R3(D ,E))

8.4



a) Chaves = {A,B}

b)

2FN(R1(A ,B ,C ,D ,E)
R2(A , C ,D))

Diagram illustrating functional dependencies for R2(A, C, D). The attributes are represented by vertical lines. Arrows indicate dependencies: A → C and A → D.

c)

3FN(R1(A ,B ,C ,D ,E)
R2(A ,C)
R2(C ,D))

d) BCNF(R1(A ,B ,E)

R2(A ,C)
R2(C ,D))

8.5

a) e b)

Venda:

A: id_venda

B: Data

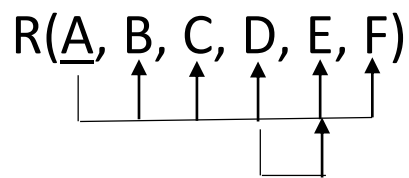
C: Hora

D: id_loja

E: NIF_Funcionario

F: id_disco

$F\{\{A\} \rightarrow \{B, C, D, E, F\}, \{D\} \rightarrow \{E\}\}$



$2FN(R1(\underline{A}, B, C, D, E, F))$

$3FN(R1(\underline{A}, B, C, D, E, F))$
 $R2(\underline{D}, E)$

$BCNF(R1(A, B, C, D, F))$
 $R2(\underline{D}, E)$

Loja:

A: id_loja


B: Endereço

C: Nome

D: Telefone

$F\{\{A\} \rightarrow \{B, C, D\}\}$

$R(\underline{A}, B, C, D)$



$2FN(R1(\underline{A}, B, C, D)) = 3FN$

Pessoa:

A: NIF

B: Nome

C: Sexo

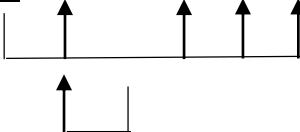
D: Endereço

E: Cod_postal


F: Telefone

$F\{\{A, B\} \rightarrow \{D, E, F\}, \{C\} \rightarrow \{B\}\}$

$R(\underline{A}, B, C, D, E, F)$



$2FN(R1(\underline{A}, B, C, D, E, F))$



$3FN(R1(\underline{A}, B, D, E, F))$

$R2(\underline{C}, B)$

Funcionário:

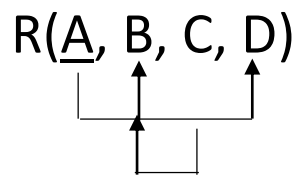
A: NIF

B: Salário

C: id_loja

D: Comissao

$F\{\{A\} \rightarrow \{B, D\}, \{C\} \rightarrow \{B\}\}$



$2FN(R1(\underline{A}, B, C, D))$

$3FN(R1(\underline{A}, B, D))$

$R2(\underline{C}, B)$

$BCNF(R1(\underline{A}, D))$

$R2(\underline{C}, B)$

Cliente:

A: NIF

B: id_loja

$F\{\{A\} \rightarrow \{B\}\}$

$R(\underline{A}, B) = 2FN = 3FN$

Standard:

A: NIF

$F\{\{A\}\}$

$R(\underline{A}) = 2FN = 3FN$

Premium:


A: NIF

B: id_mensalidade

C: id_promocao

$F\{\{A\} \rightarrow \{B, C\}\}$

$R(\underline{A}, B, C) = 2FN = 3FN$



Discos:

A: id_disco

B: Preço

C: Stock

D: Titulo

E: Ano

F: id_artista

G: id_genero

H: id_tipo

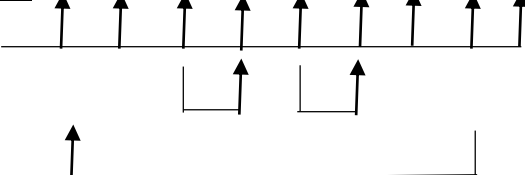
I: id_promocao

J: id_encomenda

$F\{\{A\} \rightarrow \{B, C, D, E, F, G, H, I, J\}, \{D\} \rightarrow \{E\},$

$\{I\} \rightarrow \{B\}, \{F\} \rightarrow \{G\}\}$

$R(\underline{A}, B, C, D, E, F, G, H, I, J)$



$2FN (R1(\underline{A}, B, C, D, E, F, G, H, I, J))$



3FN (R1(A, C, D, F, H, I, J)

R2(D, E)

R3(E, G)

R4(I, B))

Artistas:

A: Id_artista

B: Nome

$F\{\{A\} \rightarrow \{B\}\}$

$R(\underline{A}, B) = 2FN = 3FN$

Genero:

A: id_genero

B: Nome

$F\{\{A\} \rightarrow \{B\}\}$

$R(\underline{A}, B) = 2FN = 3FN$

TipoDiscos:

A: id_tipo

B: Nome

$F\{\{A\} \rightarrow \{B\}\}$

$R(\underline{A}, B) = 2FN = 3FN$

Encomenda:

A: id_encomenda


B: Nif_cliente

C: id_tipoEncomenda

D: id_pagamento

$F\{\{A\} \rightarrow \{B, C, D\}\}$

$R(\underline{A}, B, C, D)$



$2FN(R1(\underline{A}, B, C, D)) = 3FN$

TipoEncomenda:

A: id_TipoEncomenda

B: Tipo

$F\{\{A\} \rightarrow \{B\}\}$

$R(\underline{A}, B) = 2FN = 3FN$

Pagamentos:

A: id_pagamento

B: Metodo

$F\{\{A\} \rightarrow \{B\}\}$

$R(\underline{A}, B) = 2FN = 3FN$

Mensalidade:

A: id_mensalidade

B: Valor

C: Desconto

D: id_estado

$F\{\{A\} \rightarrow \{B, C, D\}, \{B\} \rightarrow \{C\}\}$

$R(\underline{A}, B, C, D)$

$2FN(R1(\underline{A}, B, C, D))$

$3FN(R1(\underline{A}, B, C, D))$

$R2(\underline{B}, C)$

$BCNF(R1(\underline{A}, B, D))$

$R2(\underline{B}, C)$

Estado:

A: id_estado

B: Estado

C: Atraso

$F\{\{A\} \rightarrow \{B, C\}, \{B\} \rightarrow \{C\}\}$

$R(\underline{A}, B, C)$

$2FN(R1(\underline{A}, B, C))$

3FN(R1(A, B, C)

R2(B, C))

BCNF(R1(A, B)

R2(B, C))

Artista Genero:

A: id_artista

B: id_genero

$F\{\{A\} \rightarrow \{B\}\}$

$R(\underline{A}, B) = 2FN = 3FN$

Promocao:

A: id_promocao

B: Desconto

$F\{\{A\} \rightarrow \{B\}\}$

$R(\underline{A}, B) = 2FN = 3FN$

Discos encomenda:

A: id_disco


B: id_encomenda

C: Data_expedicao

D: id_editora

$F\{\{A, B\} \rightarrow \{C, D\}\}$

$R(\underline{A}, B, C, D)$



$2FN(R1(\underline{A}, B, C, D)) = 3FN$

Editora:

A: id_editora


B: Nome

C: Contacto

D: Email

$F\{\{A\} \rightarrow \{B, C, D\}\}$

$R(\underline{A}, B, C, D)$



$2FN(R1(\underline{A}, B, C, D)) = 3FN$

