

Oefening 3 – Studenten en hun vakken

Student

id_student	name_student
10	Declercq
30	Naessens
20	Vandaele
40	Decroos
70	Verschuere
50	Dewaele

Course

Id_course	name_course
50	Concepten databanken
10	Oracle
40	DbA
30	Sql

Subscription

id_student	id_course
30	40
30	10
30	30
70	50
30	50
70	30
50	50

Oefening 3 – Studenten en hun vakken

Kandidaatsleutels?

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id_student	name_student
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30	Naessens
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Subscription

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30	40
30	10
30	30
70	50
30	50
70	30
50	50

Oefening 3 – Studenten en hun vakken

Kandidaatsleutels

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30	10
30	30
70	50
30	50
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50	50

Oefening 3 – Studenten en hun vakken

Primaire sleutels?

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Subscription

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70	50
30	50
70	30
50	50

Oefening 3 – Studenten en hun vakken

Primaire sleutel



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30	10
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70	50
30	50
70	30
50	50

Oefening 3 – Studenten en hun vakken

Alternatieve sleutels?



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Id_course	name_course
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Subscription

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30	40
30	10
30	30
70	50
30	50
70	30
50	50

Oefening 3 – Studenten en hun vakken

Primaire sleutel, alternatieve sleutel

PK

Alt

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Subscription

id_student	id_course
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30	10
30	30
70	50
30	50
70	30
50	50

Oefening 3 – Studenten en hun vakken

Verwijssleutels?

PK

Alt

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30	10
30	30
70	50
30	50
70	30
50	50

Oefening 3 – Studenten en hun vakken

Primaire sleutel, alternatieve sleutel, verwijssleutel

PK

Alt

FK

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id_student	name_student
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Oefening 3 – Studenten en hun vakken

Datastructuurdiagram

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70	30
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Oefening 3 – Studenten en hun vakken

Datastructuurdiagram



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Course

Id_course	name_course
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Subscription

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30	40
30	10
30	30
70	50
30	50
70	30
50	50

Oefening 3 – Studenten en hun vakken

Join Student en Subscription

id_student	name_student	id_course
30	Naessens	40
30	Naessens	10
30	Naessens	30
70	Verschuere	50
30	Naessens	50
70	Verschuere	30
50	Dewaele	50

Oefening 3 – Studenten en hun vakken

Join Course en Subscription

id_student	id_course	name_course
30	40	Db
30	10	Oracle
30	30	Sql
70	50	Concepten databanken
30	50	Concepten databanken
70	30	Sql
50	50	Concepten databanken

Oefening 3 – Studenten en hun vakken

Join Student, Course en Subscription

id_student	name_student	id_course	name_course
30	Naessens	40	Db
30	Naessens	10	Oracle
30	Naessens	30	Sql
70	Verschuere	50	Concepten databanken
30	Naessens	50	Concepten databanken
70	Verschuere	30	Sql
50	Dewaele	50	Concepten databanken

Oefening 3 – Studenten en hun vakken

Devos toevoegen die Oracle volgt

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Course

Id_course	name_course
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Subscription

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30	10
30	30
70	50
30	50
70	30
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Oefening 3 – Studenten en hun vakken

Devos toevoegen die Oracle volgt

1. Student → (80, 'Devos')
2. Subscription → (80,10)

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Subscription

id_student	id_course
30	40
30	10
30	30
70	50
30	50
70	30
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Oefening 3 – Studenten en hun vakken

(40, 'C++') toevoegen aan Course

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Course

Id_course	name_course
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Subscription

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30	10
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70	30
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Oefening 3 – Studenten en hun vakken

(40, 'C++') toevoegen aan Course

- Gaat niet, duplicate key

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Subscription

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Oefening 3 – Studenten en hun vakken

(70,70) en (70,null) toevoegen aan Subscription

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Course

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Subscription

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70	30
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Oefening 3 – Studenten en hun vakken

(70,70) en (70,null) toevoegen aan Subscription

- (70,70) -> niet voldaan aan **referentiële integriteit** (FK wijst naar iets dat niet bestaat)
- (70,null) -> niet voldaan aan **entiteit integriteit** (PK of deel van PK niet null)

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Oefening 3 – Studenten en hun vakken

‘Verschuere’ uitschrijven

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Course

Id_course	name_course
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Subscription

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Oefening 3 – Studenten en hun vakken

‘Verschuere’ uitschrijven

1. Uit Subscription (70,50) en (70,30)
2. Uit Student (70, ‘Verschuere’)

➔ Volgorde cruciaal!!

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Subscription

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70	30
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