

PS-1

(PSC 321)



1) a) Cardinality: 4 Arity: 3

b) Cardinality: 3 Arity: 1

2) Cust-num, order-num, order-num + item-num
item-num

3) order-item_n REF'S order. order-num
order-num

order-item. item-num REF'S item. item-num

4) Branch

branch-id	branch-name	library-name
1	Central	Rotkang PL
2	Hillyard	Sputane PL

4) cont. Holdings

Serial-no	isbn	condition	branch	location
1122	0914844366	Good	1	
1123	1558664561	Fair	1	
1124	0521150116	Excellent	3	
1125	0131604243	Good	3	

We can insert all of these in
 the order in which they
 were given

- 5) a) Courier
- b) Supplier, Store
- c) Supplier
- 6) a) check-debit(check-id, acct-num, check-num, amount, date)
- b) ("no", "no money for you", 513.74, 7/11/11)
- c) This will violate the int constraint for the check and account numbers. Either the database will reject it, or it will corrupt the database.

7) a)

- Car
- VIN (PK)
 - D-100000000000000
- Make
 - String
- Model
 - String
- Year
 - 1900-2023
- MSRP
 - Ent
- Accessory-prod-id (FK)

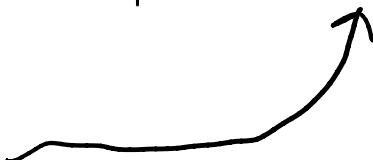
- CarAccessories
- VIN
 - D-100000000000000
- name
 - String
- prod-id (PK)
 - int

7) cont.

Car

VIN	Make	Model	MSRP	Year	acc-rod-id
1	toyota	corolla	5	1999	
2	honda	fit	10	2015	
3	bmw	mini cooper	15	2022	

Car Accessories



VIN	Name	rod-id
1	mat	50
1	lights	55
1	heater	65

8)

Student

- name
- two words

majors

- strings

- id (PK)
- int

Student

name	majors	id
Sam	BACSLT	1
Shawn	PHIL	5
Mason	DSCS	10

Course

- Name
- string

· department (PK)

- string

· num (PK)

- course number

- Enrollment
- (PK) · Semester
- Fall / Spring

- year
- int

Courses

- string

· grades

- string

Enrollment

Semester	year	courses	grades
F	2020	CSC121	B
S	2021	CSC122	A
F	2021	CSC123	D+

Course

Name	Department	Num
CSC121	CS	121
CSC122	CS	122
CSC123	CS	123

q) Employee

- Name
- office-num
- start-year
- id

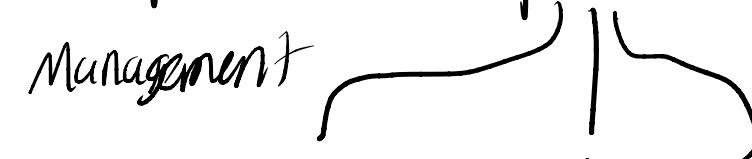
• Management

- manager
- managed

Employee

Name	office-num	start-year	id
Kyle	1	2020	4
Evan	2	2020	3
Toby	3	2015	2
Sam	4	2013	1

Management



Manager	Managed	id
4	2, 1	3
NULL	3	1

10) Spotify maintains a library, probably a DB, of millions of songs. They have artists, names, lengths, etc. playlists can then be created, adding songs from the general library. Playlists have names, songs, a creator, a privacy status, and more. You could create a song relation, and use it as a FK for playlist and general library.