

SRD2021 - Lecture 7

1. The following table with purchase orders is created:

```
CREATE TABLE PURCHASE_ORDER  
(PONR CHAR(7) NOT NULL PRIMARY KEY, PODATE DATE,  
SUPNR CHAR(4) NOT NULL,  
FOREIGN KEY (SUPNR) REFERENCES SUPPLIER (SUPNR)  
ON DELETE CASCADE ON UPDATE CASCADE);
```

What happens upon deletion of a supplier?

- ☒ (A) All purchase order records tied to that supplier are also deleted.
- ☐ (B) The SUPNR of this supplier is replaced by a NULL value in PURCHASE_ORDER.
- ☐ (C) The SUPNR of this supplier is deleted in PURCHASE_ORDER.
- ☐ (D) The SUPNR of this supplier is only deleted in SUPPLIER.

2. Which of the following fields have the highest index cardinality?

- ☐ (A) first_name
- ☐ (B) address
- ☐ (C) number_of_children
- ☒ (D) email

- 3.

Assuming that there is no index by column ID on table products and the following query takes 3 seconds:

```
SELECT * FROM products WHERE id = 2;
```

- ☐ (A) The execution time is normal
- ☒ (B) The query can be considered "slow"
- ☐ (C) We cannot improve the execution time
- ☐ (D) Adding an index by id will reduce que execution time at most by 50%

4. Which ACID property correspond to the following affirmation: "ensures that concurrent execution of transactions leaves the database in the same state that would have been obtained if the transactions were executed sequentially"

- ☐ A Atomicity
- ☐ B Consistency
- ☒ C Isolation
- ☐ D Durability

5. SQL vs NoSQL databases. Which statement is true?

- ☐ A MongoDB is a well-known relational database
- ☒ B NoSQL databases are easier to scale horizontally than relational databases
- ☐ C Relational databases are easier to scale horizontally than NoSQL
- ☐ D NoSQL databases are the best choice if we want to ensure data consistency

6. What is true about the CAP theorem?

- ☐ A Relational databases are usually associated with partition tolerance
- ☐ B Most of NoSQL databases will hold consistency and availability
- ☐ C CAP stands for: Critical, Availability, Performance
- ☒ D You can only pick two properties