

answer - 28.1

1605023

- Explain how the wide column representation supports flexible schema.
- Compare RDBMS with wide column representation.

### Solution

(a) In wide column representation, we can add new attributes to our tuples with no expensive operation. Even, a new attribute column can be added to one or two tuples and other tuples remain unchanged. These are possible with the usage of super columns and column families. Thus, wide column representation supports flexible schema.

(b)

Aspect	RDBMS	Wide Column
architecture	Schema is fixed.	Schema is flexible.
storage management	simpler.	flexible schema makes it comparatively complex but still efficient for large volume of data.
query processing	Simpler and faster for simple queries.	flexible schema makes it comparatively faster for complex queries.

Ans.

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write the relational representation of the following JSON data:

```
{
  "ID": "22222",
  "name": {
    "firstname": "Albert",
    "lastname": "Einstein"
  },
  "department": "Physics",
  "children": [
    { "firstname": "Hans", "lastname": "Einstein" },
    { "firstname": "Eduard", "lastname": "Einstein" }
  ]
}
```

Solution

Person			
ID	fname	lname	dept.
2222	Albert	Einstein	Physics

⊥

Children		
P_ID	fname	lname
2222	Hans	Einstein
2222	Eduard	Einstein

⊗

Ans.