Views

- Virtual table based on the result-set of SQL statement and that is Stored in the database with some name.

- A view can contain all rows of a table or select rows from a table.

- A view can be created from one or many tables which depends on the written SQL query to create a view.

- Restrict access to the data such that a user can see and (sometimes) modify exactly what they need and no more.

- Summarize data from various tables which can be used to generate reports.

- If table structure is changed then the view definition also has to be changed.

Views

- **Simple View**
  - A view based on only a single table, which doesn't contain GROUP BY clause and any functions.
- **Complex View**
  - A view based on multiple tables, which contain GROUP BY clause and functions.
- **Inline View**
  - A view based on a subquery in FROM Clause, that subquery creates a temporary table and simplifies the complex query.
- **Materialized View**
  - A view that stores the definition as well as data. It creates replicas of data by storing it physically.

Features	Simple View	Complex View
No Of Tables	One	One or More
Contain function	NO	Yes
Contain group of data	No	Yes

Views - Creation

Create a view for Employee-Age

```
create view empage(empcode,age)
as (select empcode, timestampdiff(year,birthdate,curdate())
from emp);
```

Views - Creation

Create a view for Employee-Pay

```
CREATE VIEW EMPPAY (EmpCode, NetPay,
                              SalMonth) AS
   ( SELECT    EmpCode,
                (Basic + Allow - Deduct), SalMonth
    FROM    Salary );
```

Use of Views

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List employees and their ages

SELECT *
FROM   EMPAGE;

Views - Complex

Create a view for displaying the number of employees in each department

```
CREATE VIEW DeptEmpCount
      (DeptCode, DeptEmpCount) AS
(SELECT      DeptCode, count(*)
FROM         Emp
GROUP BY   DeptCode);
```

Use of Views

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Create a view for display the total number of employees of the organization

```
CREATE VIEW EmpCount (EmpCount) AS
(SELECT      count(*) as EmpCount
FROM        Emp);
```

Use of Views

Display the percentage of employees in each department

```
select deptcode,(deptempcount/empcount)*100
from deptempcount,empcount
order by deptcode;
```

Views - Updation

Update the view for Employee-Pay definition

alter view emppay(empcode,netpay,salmonth)
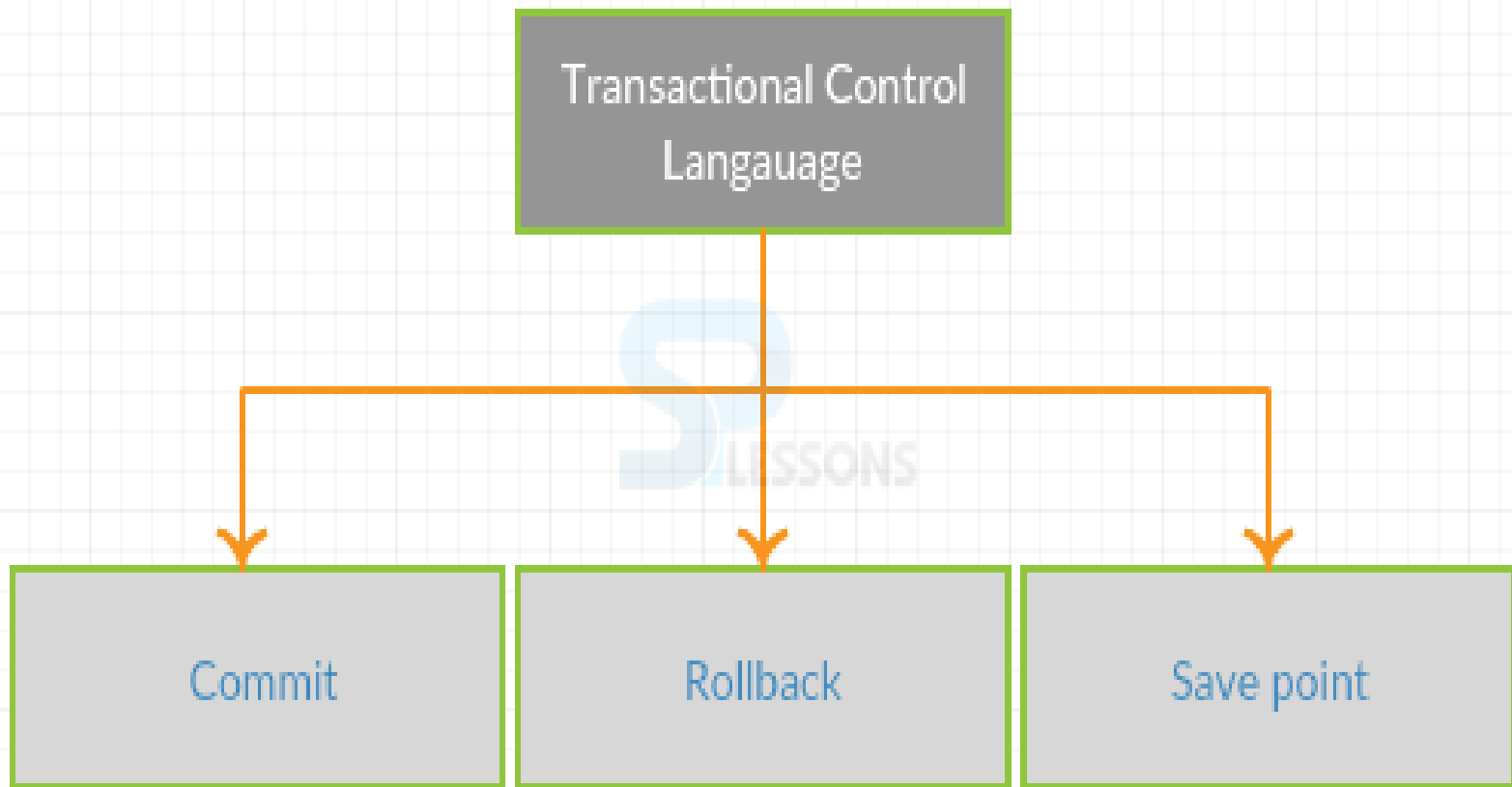as (select empcode, (basic+allow-deduct)+1000,salmonth from salary);

Views - Deletion

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DROP VIEW EMPPAY;

TCL Commands
(Commit/Rollback/Savepoint)

TCL Commands

- **Commit:**
  - Commit command is used to save all the transactions to the database.

- **Rollback:**
  - Rollback command is used to undo transactions that have not already been saved to the database.

- **SAVEPOINT:**
  - It is used to roll the transaction back to a certain point without rolling back the entire transaction.