SQL Cheat Sheet: Views, Stored Procedures and Transactions

Views

Topic	Syntax	Description	Example
Create View	`CREATE VIEW view_name AS SELECT column1, column2, ... FROM table_name WHERE condition;`	A `CREATE VIEW` is an alternative way of representing data that exists in one or more tables.	`CREATE VIEW EMPSALARY AS SELECT EMP_ID, F_NAME, L_NAME, B_DATE, SEX, SALARY FROM EMPLOYEES;`
Update a View	`CREATE OR REPLACE VIEW view_name AS SELECT column1, column2, ... FROM table_name WHERE condition;`	The `CREATE OR REPLACE` VIEW command updates a view.	`CREATE OR REPLACE VIEW EMPSALARY AS SELECT EMP_ID, F_NAME, L_NAME, B_DATE, SEX, JOB_TITLE, MIN_SALARY, MAX_SALARY FROM EMPLOYEES, JOBS WHERE EMPLOYEES.JOB_ID = JOBS.JOB_IDENT;`
Drop a View	`DROP VIEW view_name;`	Use the `DROP VIEW` statement to remove a view from the database.	`DROP VIEW EMPSALARY;`

Stored Procedures in IBM Db2 using SQL

Stored Procedures	`--#SET TERMINATOR @ CREATE PROCEDURE PROCEDURE_NAME`
	`LANGUAGE`
	`BEGIN`
	`END`
	`@`
		A `stored procedure` is a prepared SQL code that you can save, so the code can be reused over and over again.
		The default terminator for a stored procedure is semicolon(;). To set a different terminator we use `SET TERMINATOR` clause followed by the terminator such as '@'.
			`--#SET TERMINATOR @ CREATE PROCEDURE RETRIEVE_ALL`
			`LANGUAGE SQL`
			`READS SQL DATA`
			`DYNAMIC RESULT SETS 1`
			`BEGIN`
			`DECLARE C1 CURSOR`
			`WITH RETURN FOR`
			`SELECT * FROM PETSALE;`
			`OPEN C1;`
			`END`
			`@`

Stored Procedures in MySQL using phpMyAdmin

Stored Procedures	`DELIMITER //`
	`CREATE PROCEDURE PROCEDURE_NAME`
	`BEGIN`
	`END //`
	`DELIMITER ;`
		A `stored procedure` is a prepared SQL code that you can save, so the code can be reused over and over again.
		The default terminator for a stored procedure is semicolon (;). To set a different terminator we use `DELIMITER` clause followed by the terminator such as $$ or //.
			`DELIMITER //`
			`CREATE PROCEDURE RETRIEVE_ALL()`
			`BEGIN`
			`SELECT * FROM PETSALE;`
			`END //`
			`DELIMITER ;`

Transactions with Db2

Commit command

```
COMMIT;
```

A `COMMIT` command is used to persist the changes in the database.

The default terminator for a COMMIT command is semicolon (;).

```
CREATE TABLE employee(ID INT, Name VARCHAR(20), City VARCHAR(20), Salary INT, Age INT);

INSERT INTO employee( ID, Name, City, Salary, Age) VALUES( 1, ‘Priyanka pal’, ‘Nasik’, 36000, 21), (2, ‘Riya chowdary’, ‘Bangalor’,
82000, 29);

SELECT *FROM employee;
COMMIT;
```

As auto-commit is enabled by default, all transactions will be committed. We need to disable this option to see how rollback works.

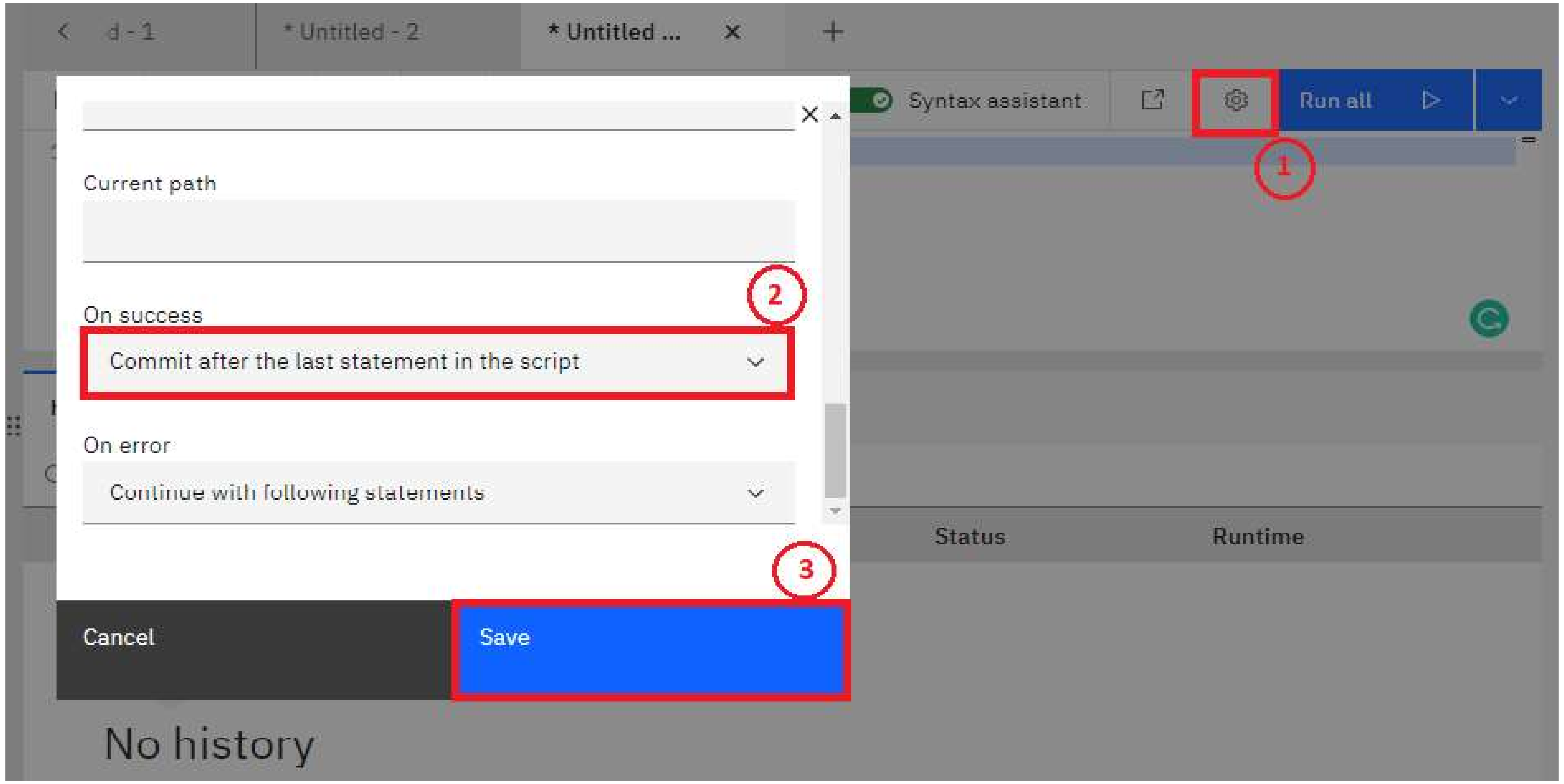
For db2, we have to disable auto-commit manually. Click the gear icon located on the right side of the SQL Assistant window. Next, select the “On Success” drop-down and choose “commit after the last statement in the script” Remember to save your changes!

Rollback command

```
ROLLBACK;
```

A `ROLLBACK` command is used to rollback the transactions which are not saved in the database.

The default terminator for a ROLLBACK command is semicolon (;).



Current path:

On success: Commit after the last statement in the script

On error: Continue with following statements

```
INSERT INTO employee VALUES (3, ‘Swetha Tiwari’, ‘Kanpur’, 38000, 38);

SELECT *FROM employee;
ROLLBACK;
SELECT *FROM employee;
```

Transactions with MySQL

Commit command

```
COMMIT;
```

A `COMMIT` command is used to persist the changes in the database.

The default terminator for a COMMIT command is semicolon (;).

```
CREATE TABLE employee(ID INT, Name VARCHAR(20), City
VARCHAR(20), Salary INT, Age INT);

START TRANSACTION;

INSERT INTO employee( ID, Name, City, Salary, Age) VALUES( 1,
‘Priyanka pal’, ‘Nasik’, 36000, 21), (2, ‘Riya chowdary’,
‘Bangalor’, 82000, 29);
```

Rollback command	`ROLLBACK;`	A `ROLLBACK command` is used to rollback the transactions which are not saved in the database.
		The default terminator for a ROLLBACK command is semicolon (;).
			`SELECT *FROM employee;`
			`COMMIT;`
			As auto-commit is enabled by default, all transactions will be committed. We need to disable this option to see how rollback works. For MySQL use the command “SET autocommit = 0;”
			`INSERT INTO employee VALUES (3, ‘Swetha Tiwari’, ‘Kanpur’, 38000, 38);`
			`SELECT *FROM employee;`
			`ROLLBACK;`
			`SELECT *FROM employee;`

Db2 Transactions using Stored Procedure

Commit command	`–#SET TERMINATOR @`
	`CREATE PROCEDURE PROCEDURE_NAME`
	`BEGIN`
	`COMMIT;`
	`END`
	`@`
		A `COMMIT command` is used to persist the changes in the database.
		The default terminator for a COMMIT command is semicolon (;).
			`--#SET TERMINATOR @ CREATE PROCEDURE TRANSACTION_ROSE LANGUAGE SQL MODIFIES SQL DATA`
			`BEGIN`
			`DECLARE SQLCODE INTEGER DEFAULT 0;`
			`DECLARE retcode INTEGER DEFAULT 0;`
			`DECLARE CONTINUE HANDLER FOR SQLEXCEPTION`
			`SET retcode = SQLCODE;`
			`UPDATE BankAccounts`
			`SET Balance = Balance-200`
			`WHERE AccountName = ‘Rose’;`
			`UPDATE BankAccounts`
			`SET Balance = Balance-300`
			`WHERE AccountName = ‘Rose’;`
			`IF retcode < 0 THEN`
			`ROLLBACK WORK;`
			`ELSE`
			`COMMIT WORK;`
			`END IF;`
			`END`
			`@`

Rollback command	`--#SET TERMINATOR @`
	`CREATE PROCEDURE PROCEDURE_NAME`
	`BEGIN`
	`ROLLBACK;`
	`COMMIT;`
	`END`
	`@`
		A `ROLLBACK command` is used to rollback the transactions which are not saved in the database.
		The default terminator for a ROLLBACK command is semicolon (;).
			`--#SET TERMINATOR @ CREATE PROCEDURE TRANSACTION_ROSE LANGUAGE SQL MODIFIES SQL DATA`
			`BEGIN`
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			`DECLARE CONTINUE HANDLER FOR SQLEXCEPTION`
			`SET retcode = SQLCODE;`
			`UPDATE BankAccounts`
			`SET Balance = Balance-200`
			`WHERE AccountName = ‘Rose’;`
			`UPDATE BankAccounts`
			`SET Balance = Balance-300`
			`WHERE AccountName = ‘Rose’;`
			`IF retcode < 0 THEN`
			`ROLLBACK WORK;`

```
ELSE
COMMIT WORK;

END IF;

END
@
```

MySQL Transactions using Stored Procedure

Commit command

```
DELIMITER //

CREATE PROCEDURE PROCEDURE_NAME

BEGIN

COMMIT;

END //

DELIMITER ;
```

A `COMMIT command` is used to persist the changes in the database.

The default terminator for a COMMIT command is semicolon (;).

```
DELIMITER //

CREATE PROCEDURE TRANSACTION_ROSE()

BEGIN

DECLARE EXIT HANDLER FOR SQLEXCEPTION
BEGIN
ROLLBACK;
RESIGNAL;
END;

START TRANSACTION;
UPDATE BankAccounts
SET Balance = Balance-200
WHERE AccountName = ‘Rose’;

UPDATE BankAccounts
SET Balance = Balance-300
WHERE AccountName = ‘Rose’;

COMMIT;

END //

DELIMITER ;
```

Rollback command

```
DELIMITER //

CREATE PROCEDURE PROCEDURE_NAME

BEGIN

ROLLBACK;

COMMIT;

END //

DELIMITER ;
```

A `ROLLBACK command` is used to rollback the transactions which are not saved in the database.

The default terminator for a ROLLBACK command is semicolon (;).

```
DELIMITER //

CREATE PROCEDURE TRANSACTION_ROSE()

BEGIN

DECLARE EXIT HANDLER FOR SQLEXCEPTION
BEGIN
ROLLBACK;
RESIGNAL;
END;

START TRANSACTION;
UPDATE BankAccounts
SET Balance = Balance-200
WHERE AccountName = ‘Rose’;

UPDATE BankAccounts
SET Balance = Balance-300
WHERE AccountName = ‘Rose’;

COMMIT;

END //

DELIMITER ;
```

Author(s)

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Changelog

Date	Version	Changed by	Change Description
2022-10-04	1.0	D.M.Naidu	Initial Version