



R.M.K

COLLEGE OF ENGINEERING AND TECHNOLOGY

Department of Computer Science and Engineering

Date: 06-04-20

Target audience: II Year
CSE Students

Facilitator:

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Convenor: Dr.D.Paulraj,

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Topic : Creating Procedures & Triggers using PL/SQL
(Hands on session)

Summary:

The webinar aimed at providing hands on experience in creating procedures and triggers using PL/SQL. Students were trained with PL/SQL statements using mysql database and practice exercises were given at end of the session.

Tools Used

MYSQL:

MYSQL is a database management system that allows us to manage relational databases. It is open source software backed by Oracle. It means we can use MySQL without paying a dime. Also, if we want, we can change its source code to suit our needs. Even though MySQL is open source software, we can buy a commercial license version from Oracle to get premium support services. MySQL is pretty easy to master in comparison with other database software like Oracle Database, or Microsoft SQL Server. MySQL can run on various platforms UNIX, Linux, Windows, etc. We can install it on a server or even in a desktop.

PL/SQL:

PL/SQL is a block structured language. The programs of PL/SQL are logical blocks that can contain any number of nested sub-blocks. PL/SQL stands for "Procedural Language extension of SQL" that is used in database systems like MYSQL. PL/SQL is integrated with Oracle database (since version 7). The functionalities of PL/SQL usually extended after each release of Oracle database. Although PL/SQL is closely integrated with SQL language, yet it adds some programming constraints that are not available in SQL. We can create PL/SQL units like procedures, functions, packages, types and triggers, etc. which are stored in the database for reuse by applications.

Summary of the technical session.

The participants were trained in the following

- To create PL/SQL blocks.
- To create PL/SQL procedures for real-time applications.

The screenshot shows a HackerRank question titled "2. PL/SQL Procedures". The question asks to create a PL/SQL procedure for finding the total credited amount of a given account number. The table schema is: TRANSACTION(ACCNO INTEGER(10), TRANS_TYPE VARCHAR(2), AMOUNT INTEGER(10), DOT DATE). The code editor contains the following SQL code:

```
1 > delimiter $$...
2
3
4 CREATE PROCEDURE MY_PROCEDURE(ACCNTNO NUMERIC(10))
5
6 BEGIN
7
8 SELECT SUM(AMOUNT) FROM TRANSACTION WHERE TRANS_TYPE='C' AND
9 ACCNO=ACCNTNO;
10
11 END
12 $$
13
14 > |
```

- To execute the created procedures.
- About Triggers and types of trigger i.e. statement level trigger and row level trigger.
- To create triggers for real-time applications.

The screenshot shows a HackerRank question titled "3. PL/SQL Triggers". The question asks to create a trigger for inserting records in the TRANSACTION_BACKUP table. Whenever a record is inserted in the TRANSACTION table then the same record should also be inserted in the TRANSACTION_BACKUP table. The table schemas are: TRANSACTION(ACCNO INTEGER(10), TRANS_TYPE VARCHAR(2), AMOUNT INTEGER(10), DOT DATE); TRANSACTION_BACKUP(ACCNO INTEGER(10), TRANS_TYPE VARCHAR(2), AMOUNT INTEGER(10), DOT DATE). The code editor contains the following SQL code:

```
1 > delimiter $$...
2
3
4 CREATE TRIGGER TRANS_INSRT AFTER INSERT ON TRANSACTION
5 FOR EACH ROWS
6
7 BEGIN
8
9 INSERT INTO TRANSACTION_BACKUP VALUES(NEW.ACCNO,
10 NEW.TRANS_TYPE,NEW.AMOUNT,NEW.DATE);
11
12 END
13 $$
14 > |
```