Assignment A5

TITLE:
Create a procedure for Fine Calculation.

PROBLEM STATEMENT:-
Write a PL/SQL block of code or a stored procedure to implement the given MySQL statements.

OBJECTIVE

To understand the control structure.
To understand exception handling in PL/SQL.

OUTCOME

To be able to implement PL/SQL block, user defined and pre defined exception handling
Control structure using PL/SQL

S/W and H/W Reqs.

MySQL, 64 bit Linux,

THEORY:-

PL/SQL:-

PL/SQL stands for Procedural Language/Structured Query Language. It offers set of procedural commands, organised within blocks that complement and extend of SQL.

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Blocks in PL/SQL

PL/SQL is a block structured language. A PL/SQL block is defined by keywords DECLARE, BEGIN, EXCEPTION AND END which breakup the stock into three sections.

1. Declarative
   Statements that declare variables, constant and other code elements which can be used without the block

2. Executable
   Statements that are run when the block is executed

3. Exception Handling
   A specially structured section that you can use to catch exceptions that are used.

General Structure.

```
DECLARE
    // declaration section
BEGIN
    // Data/code section
EXCEPTION
    // Exception section
END
```

Types of Exception

1. Named System Exception.
   System exceptions that are automatically raised by Oracle, when a program violates RDBMS rule.

2. Unnamed System Exception
   The system exceptions for which oracle does not provide a name are unnamed system exceptions.

3. User Defined Exceptions.
   Apart from system exception are can explicitly define expectations based on business rule known as user defined exceptions.

Stored Procedure.

A stored procedure is a named PL/SQL block which performs one or more specific task. It has a header and a body. The header consists of a name of procedure and parameters. The body consists of declaration, execution and exception section. It may or may not return a value.

Types of parametes.

1. IN parameter
2. OUT parameter
3. IN OUT parameter

TEST CASES.

Description	Input	Output	Result.
INSERT	INSERT INTO <parameter> VALUES (11, 'Vink', 2020-08-07, 'CN')		SUCCESS
	INSERT INO <parameter> VALUES (1, 'Rachael', 2020-08-22, 'Python')		
EXECUTE procedure	call ~~Bookreturn~~ fine (1, 'CN')	Roll No DOR Amt.	SUCCESS
	call fine (2, 'Python')	1 2020-08-28 1150	
		2 2020-07-28 500	

CONCLUSION

Control structure was understood and exception handling PL/SQL and stored procedure was implemented.