

Dt : 7/10/2024(Day-12)

**\*imp**

### **3.CallableStatement:**

=>'CallableStatement' is an interface from java.sql package and which is used to execute 'Procedures and Functions' on Database process.

=>we use prepareCall()-method from 'Connection-Interface' to create implementation object for 'CallableStatement-Interface'.

=>This prepareCall()-method internally holding 'Anonymous Local InnerClass as implementation class of CallableStatement Interface'.

**Method Signature of prepareCall():**

**public abstract java.sql.CallableStatement prepareCall(java.lang.String) throws  
java.sql.SQLException;**

**syntax:**

**CallableStatement cs = con.prepareCall("{call Proc/Func}");**

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**faq:**

**define 'Procedure'?**

=>Procedure is a set-of-queries executed at-a-time on Database product and after execution procedure will not return any value,which means procedure is NonReturn\_type.

**structure of Procedure:**

**create or replace procedure Procedure\_name**

**(para\_list) is**

**begin**

*query-1*

*query-2*

*...*

*end;*

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#### ***Types of Procedures:***

***=>According to JDBC,Procedures are categorized into three types:***

***(a)IN-Parameter Procedures***

***(b)OUT-Parameter Procedures***

***(c)IN-OUT Prameter Procedures***

#### ***(a)IN-Parameter Procedures:***

***=>The Procedures which take the data from Java-Program and send to Database product are known as IN-Parameter Procedures.***

#### ***(b)OUT-Parameter Procedures:***

***=>The Procedures which take the data from Database product and send to Java-Program are known as OUT-Parameter Procedures.***

#### ***(c)IN-OUT Prameter Procedures:***

***=>The Procedures which take and give data are known as IN-OUT Parameter Procedures.***

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***Creating and executing Procedure:(In-Parameter Procedure)***

**step-1 : Create the following tables related to Bank-Customer**

**BankCustomer67(accno,name,bal,acctype)**

**CustAddress67(accno,city,state,pincode)**

**CustContact67(accno,mid,phno)**

**create table BankCustomer67(accno number(15),name varchar2(15),bal number(10,2),  
acctype varchar2(15),primary key(accno));**

**create table CustAddress67(accno number(15),city varchar2(15),state varchar2(15),  
pincode number(10),primary key(accno));**

**create table CustContact67(accno number(15),mid varchar2(25),phno number(15),  
primary key(accno));**

**step-2 : Construct Procedure to insert details into Cust-tables**

**create or replace procedure CreateAccount67**

**(acno number,nm varchar2,bl number,atype varchar2,cty varchar2,st varchar2,  
pcode number,md varchar2,pno number) is**

**begin**

**insert into BankCustomer67 values(acno,nm,bl,atype);**

**insert into CustAddress67 values(acno,cty,st,pcode);**

**insert into CustContact67 values(acno,md,pno);**

**end;**

**/**

step-3 : Construct JDBC Application to execute Procedure to insert data to

Customer tables

Program : DBCon8.java

```
package test;
import java.util.*;
import java.sql.*;
public class DBCon8 {
    public static void main(String[] args) {
        Scanner s = new Scanner(System.in);
        try(s){
            Class.forName("oracle.jdbc.driver.OracleDriver");
            Connection con = DriverManager.getConnection
("jdbc:oracle:thin:@localhost:1521:xe", "system", "tiger");
            CallableStatement cs = con.prepareCall
                ("{call CreateAccount67(?,?,?,?,?,?,?,?,?)}");

            System.out.println("Enter Cust-AccNo:");
            Long accNo = Long.parseLong(s.nextLine());
            System.out.println("Enter Cust-Name:");
            String name = s.nextLine();
            System.out.println("Enter Cust-Balance:");
            float bal = Float.parseFloat(s.nextLine());
            System.out.println("Enter Cust-AccType:");
            String accType = s.nextLine();
            System.out.println("Enter Cust-City:");
            String city = s.nextLine();
            System.out.println("Enter Cust-State:");
            String state = s.nextLine();
            System.out.println("Enter Cust-PinCode:");
            int pinCode = Integer.parseInt(s.nextLine());
            System.out.println("Enter Cust-MailId:");
            String mId = s.nextLine();
            System.out.println("Enter Cust-PhoneNo:");
            Long phNo = Long.parseLong(s.nextLine());

            //Load data to CallableStatement Object
            cs.setLong(1, accNo);
            cs.setString(2, name);
            cs.setFloat(3, bal);
            cs.setString(4, accType);
            cs.setString(5, city);
            cs.setString(6, state);
            cs.setInt(7, pinCode);
            cs.setString(8, mId);
```

```
        cs.setFloat(9, phNo);

        cs.execute();//Procedure executed
        System.out.println("Customer account created successfully...");
        con.close();
    }catch(Exception e) {
        System.out.println(e.toString());
    }
}
```

**o/p:**

**Enter Cust-AccNo:**

**6123456**

**Enter Cust-Name:**

**Alex**

**Enter Cust-Balance:**

**5000**

**Enter Cust-AccType:**

**Savings**

**Enter Cust-City:**

**Hyd**

**Enter Cust-State:**

**TG**

**Enter Cust-PinCode:**

**506112**

**Enter Cust-MailId:**

**alex@gmail.com**

**Enter Cust-PhoneNo:**

**9898981234**

Customer account created successfully...

Layout:

