

JDBC PART-5

CallableStatement interface:

CallableStatement interface is used to call stored procedures from java program.

Stored Procedure is a group of statements that we compile in the database for some task.

Stored procedures are useful while dealing with multiple tables with complex tasks and rather than sending multiple queries to the database, we can send required data to the stored procedure and have the logic executed in the database server itself.

Procedure with Input Parameters Example:

```
import java.sql.*;

class ProcedureDemo
{
    public static void main(String args[])
    {
        try{
            Class.forName("oracle.jdbc.driver.OracleDriver");
            Connection
con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe","system","manager");

            CallableStatement cstmt=con.prepareCall("{ call
insertpro(?,?,?) }");
```

```
        pstmt.setInt(1, Integer.parseInt(args[0]));
        pstmt.setString(2, args[1]);
        pstmt.setInt(3, Integer.parseInt(args[2]));
        pstmt.execute();
        System.out.println("One Record Inserted Successfully");
    } catch (Exception e)
    {
        System.err.println(e);
    }
}
```

Procedure with Input & Output Parameters Example:

```
import java.sql.*;

class Demo
{
    public static void main(String args[]) throws Exception
    {
        Class.forName("oracle.jdbc.driver.OracleDriver");

        Connection
        con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe",
        "system","manager");

        CallableStatement pstmt=con.prepareCall("{ call
        getmarks(?,?) }");
```

```
        pstmt.setInt(1, Integer.parseInt(args[0]));  
        pstmt.registerOutParameter(2, Types.INTEGER);  
        pstmt.executeQuery();  
        System.out.println(pstmt.getInt(2));  
    }  
}
```

SQL Procedure:

create or replace procedure getmarks(r in student.rollno%type, m out student.marks%type) as

begin

select marks into m from student where rollno=r;

end;

/

Function Example:

```
import java.sql.*;
```

```
class Demo
```

```
{
```

```
    public static void main(String args[])throws Exception
```

```
    {
```

```
        Class.forName("oracle.jdbc.driver.OracleDriver");
```

```
        Connection
```

```
con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe",  
"system","manager");
```

```
CallableStatement cstmt=con.prepareCall("{ ?=call  
totalstudents() }");  
  
cstmt.registerOutParameter(1, Types.INTEGER);  
  
cstmt.execute();  
  
System.out.println(cstmt.getInt(1));  
  
}  
  
}
```

SQL Function:

```
create or replace function totalstudents  
return number is  
total number(2):=0;  
begin  
select count(*) into total from student;  
return total;  
end;  
/
```

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