

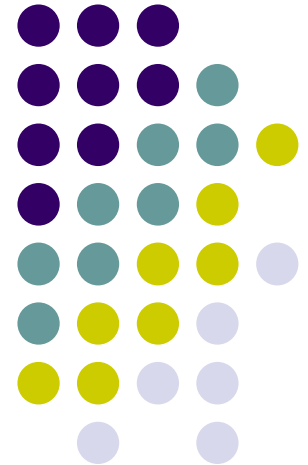


ຄະນະວິທະຍາສາດທຳມະຊາດ
ພາກວິຊາ ວິທະຍາສາດຄອມພິວເຕີ

ເວບໂປຣແກຣມມິງ 2

(Web Programming 2)

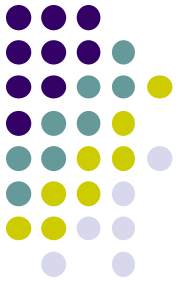
ສອນໂດຍ: ອຈ. ເພັດ ສອນວິໄລ
ມືຖື: 020 58390300
ອີເມວ: p.sonevilay@nuol.edu.la



ບົດທີ6

ການຕິດຕໍ່ຖານຂໍ້ມູນ (Accessing the database)





ເນື້ອໃນໂດຍລວມ

- ແນະນຳເບື້ອງຕົ້ນ
- ການເຊື່ອມຕໍ່ຖານຂໍ້ມູນ
- ຖານຂໍ້ມູນ MySQL
- ການຈັດການຂໍ້ມູນ MySQL
- ຖານຂໍ້ມູນ Oracle
- ການຈັດການຂໍ້ມູນ Oracle

ແນະນຳເບື້ອງຕົ້ນ



- PHP ສາມາດເຊື່ອມຕໍ່ກັບຖານຂໍ້ມູນ MySQL, PostgreSQL, SYBASE, IBM-DB2, Oracle, ຖານຂໍ້ມູນ Microsoft Access, ແລະ SQL Server ໄດ້.



PostgreSQL



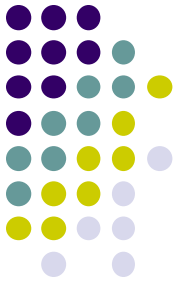
SYBASE

ການເຊື່ອມຕໍ່ຖານຂໍ້ມູນ



- PHP ເຊື່ອມຕໍ່ MySQL ຈະໃຊ້ Function ຊື່ `mysql_connect()`, `mysql_pconnect()`, `mysqli_connect` ຫຼື PDO ກໍໄດ້.
- ສໍາລັບຕິດຕໍ່ກັບ Microsoft Access, SQL Server, Oracle ແລະ ອື່ນໆ ແມ່ນຈະນໍາໃຊ້ຊຸດຄໍາສັ່ງ PDO.

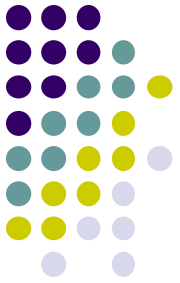
ຖານຂໍ້ມູນ MySQL



- ການເຊື່ອມຕໍ່ກັບ MySQL
 - ຮູບແບບທີ 1:

```
$conn = mysql_connect( "hostname", " username ", "password" );  
if ( !$conn ) {  
    die( "Couldn't connect to MySQL" );  
}  
mysql_select_db("dbname");
```

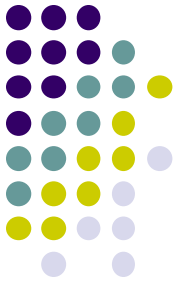
ຖານຂໍ້ມູນ MySQL



- ການເຊື່ອມຕໍ່ກັບ MySQL
 - ຮູບແບບທີ 2:

```
$ conn = mysqli_connect( "hostname", " username ",  
"password","dbname" );  
if (mysqli_connect_errno()) {  
    echo "Failed to connect to MySQL: " . mysqli_connect_error();  
}
```

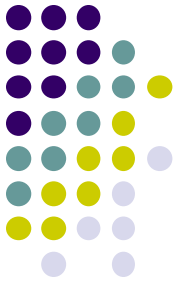
ຖານຂໍ້ມູນ MySQL



- ການເຊື່ອມຕໍ່ກັບ MySQL
 - ຮູບແບບທີ 3:

```
try
{
    $PDO = new PDO(
        "mysql:host=". $host .";"."dbname=". $dbname, $user, $pass,
        array(PDO::MYSQL_ATTR_INIT_COMMAND=>"SET NAMES utf8"));
}
catch(PDOException $e)
{
    die($e->getMessage());
}
```


ການຂໍ້ມູນ MySQL

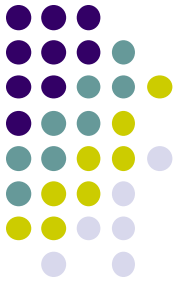


- ການເຊື່ອມຕໍ່ກັບ MySQL
 - ຕົວຢ່າງ 1:

```
<?php
$conn = mysql_connect( "localhost", " root ", "rootpassword" );
if ( !$conn) {
    die( "Couldn't connect to MySQL" );
}
mysql_select_db("myweb2");
mysql_query( "SET NAMES utf8", $conn);

mysql_close($conn);
?>
```

ຖານຂໍ້ມູນ MySQL



- ການເຊື່ອມຕໍ່ກັບ MySQL
 - ຕົວຢ່າງ 2:

```
<?php
$servername = "localhost";
$username = "username";
$password = "password";
$dbname="dbname";
$conn = mysqli_connect($servername, $username,
$password,$dbname);

if (!$conn) {
    die("Connection failed: " . mysqli_connect_error());
}
echo "Connected successfully";
?>
```

ຖານຂໍ້ມູນ MySQL



- ການເຊື່ອມຕໍ່ກັບ MySQL
 - ຕົວຢ່າງ 3:

```
<?php
$servername = "localhost";
$username = "username";
$password = "password";
$conn = new mysqli($servername, $username, $password);
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}
echo "Connected successfully";
?>
```

ການຂໍ້ມູນ MySQL



- ການເຊື່ອມຕໍ່ກັບ MySQL

- ຕົວຢ່າງ 4:

```
<?php
$servername = "localhost";
$username = "username";
$password = "password";
try {
    $conn = new PDO("mysql:host=$servername;dbname=myDB", $username,
$password);
    $conn->setAttribute(PDO::ATTR_ERRMODE, PDO::ERRMODE_EXCEPTION);
    echo "Connected successfully";
}
catch(PDOException $e)
{
    echo "Connection failed: " . $e->getMessage();
}
?>
```



ການຈັດການຂໍ້ມູນ MySQL

- ການຈັດການກັບຂໍ້ມູນຢູ່ໃນຖານຂໍ້ມູນມີຮູບແບບລຸ່ມນີ້

\$query=SQL-statement

mysql_query(\$query, \$conn)

- ໝາຍເຫດ:

SQL-statement ໝາຍເຖິງຄໍາສັ່ງ SQL, \$conn: ຕົວ
ປຸງນທີ່ເກັບຄໍາການເຊື່ອມຕໍ່ MySQL



ການຈັດການຂໍ້ມູນ MySQL

- ການສະແດງຂໍ້ມູນໂດຍນຳໃຊ້ ຄໍາສັ່ງ
 - `mysql_fetch_row()`,
 - `mysql_fetch_array()`
 - ແລະ `mysql_fetch_object()`

- ໝາຍເຫດ:

ສໍາລັບ MySQLi ຈະເພີ່ມ “i” ຕໍ່ຈາກ `mysql` ເປັນ `mysqli`

ການຈັດການຂໍ້ມູນ MySQL



- ຕົວຢ່າງ: ການສະແດງຂໍ້ມູນ, ຖານຂໍ້ມູນຊື່ test ແລະ ຕາຕະລາງຊື່ product

```
CREATE DATABASE IF NOT EXISTS `test`;
```

```
CREATE TABLE IF NOT EXISTS `product` (  
  `id` int(11) NOT NULL AUTO_INCREMENT,  
  `p_name` varchar(50) NOT NULL,  
  `price` double NOT NULL,  
  `qty` int(11) NOT NULL,  
  PRIMARY KEY (`id`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8 AUTO_INCREMENT=1 ;
```



ການຈັດການຂໍ້ມູນ MySQL

- ຕົວຢ່າງ: ນຳຂໍ້ມູນເຂົ້າ

```
-- Dumping data for table `product`
```

```
--
```

```
INSERT INTO `product` (`id`, `p_name`, `price`, `qty`)  
VALUES
```

```
  (1, 'pizza', 50000, 2),
```

```
  (2, 'Milk', 3000, 20),
```

```
  (3, 'Candy', 1000, 80),
```

```
  (4, 'bakery', 3000, 10);
```




ການຈັດການຂໍ້ມູນ MySQL

- ຕົວຢ່າງ: ໄຟລ conndb.php ເພື່ອເຊື່ອມຕໍ່

```
<?php
```

```
$conn = mysqli_connect( "localhost", " root ",  
"password","test");
```

```
if (!$conn) {
```

```
    die( "Couldn't connect to MySQL" );
```

```
}
```

```
mysqli_query("SET NAMES utf8", $conn);
```

```
?>
```

ການຈັດການຂໍ້ມູນ MySQL



- ຕົວຢ່າງ: ໄຟລ viewdata.php ເພື່ອສະແດງຂໍ້ມູນ

```
<?php
```

```
include("conndb.php");
```

```
$result = mysqli_query($conn,"SELECT * FROM  
product") or die(mysqli_error());
```

```
while ($row = mysqli_fetch_assoc($result)) {  
    echo $row['id']."". $row['p_name']."". $row['price']."".  
    $row['qty'] . "<br>";  
}  
?>
```

ການຈັດການຂໍ້ມູນ MySQL



- ຕົວຢ່າງ: ຖ້າຕ້ອງການສະແດງຂໍ້ມູນອອກມາຢູ່ໃນຮູບແບບຂອງຕາຕະລາງ HTML

```
<?php
include("conndb.php");
$result=mysqli_query($conn,"select
p_name, price, qty from product ");
$i=1;
while($data=mysqli_fetch_row($result)){
?>
```

```
<tr>
<td><?php echo $i; ?></td>
<td><?php echo $data[0]; ?></td>
<td><?php echo $data[1]; ?></td>
<td><?php echo $data[2]; ?></td>

<td><a href="del.php?pid=<?php
echo $data[0];?>">ລຶບ</a></td>
<td><a
href="editform.php?pid=<?php echo
$data[0];?>">ແກ້ໄຂ</a></td>
</tr>

<?php
                                $i++;
                                }
?>
</table>
```

ການຈັດການຂໍ້ມູນ MySQL



- ຕົວຢ່າງ: ຜົນໄດ້ຮັບ

ລະຫັດ	ຊື່ສິນຄ້າ	ລາຄາ	ຈຳນວນ	ລືບ	ແກ້ໄຂ
1	ແປ້ບຊີ	3000	15	ລືບ	ແກ້ໄຂ
2	ນ້ຳດື່ມຫົວເສືອ	3000	10	ລືບ	ແກ້ໄຂ
3	pizza	50000	2	ລືບ	ແກ້ໄຂ
4	bakery	3000	10	ລືບ	ແກ້ໄຂ

ໝາຍເຫດ: ໃຫ້ນຳໃຊ້ Table ຈາກ Bootstrap ເພື່ອການສະແດງຜົນຂໍ້ມູນໃຫ້ເປັນມາດຕະຖານ

ການຈັດການຂໍ້ມູນ MySQL



- ຕົວຢ່າງ: ການເພີ່ມຂໍ້ມູນ

```
<?php
```

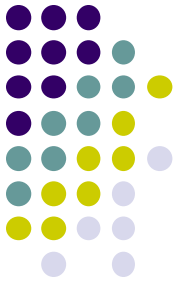
```
include("conndb.php");
```

```
$result=mysqli_query($conn,"INSERT INTO  
product(p_name,price,qty) VALUES('candy','1000','50')")  
or die(mysql_error());
```

```
}
```

```
?>
```

ການຈັດການຂໍ້ມູນ MySQL



- ຕົວຢ່າງ: ການເພີ່ມຂໍ້ມູນຜ່ານ Form

```
<form method="POST" action="add.php">
```

ProductName

```
<input type="text" name="txt1">
```

Price

```
<input type="text" name="txt2">
```

Qty

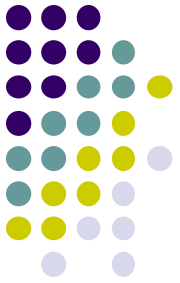
```
<input type="text" name="txt3">
```

```
    <input type="submit" value="ເພີ່ມ">
```

```
    <a href="product.php">ກັບຄືນ</a>
```

```
</form>
```

ການຈັດການຂໍ້ມູນ MySQL



- ຕົວຢ່າງ: ຜົນໄດ້ຮັບ

ຟອມປ້ອນຂໍ້ມູນສິນຄ້າ

ProductName

Price

Qty

ເພີ່ມ

ກັບຄືນ

ການຈັດການຂໍ້ມູນ MySQL



- ຕົວຢ່າງ: ສ້າງໄຟຊ້໌ add.php ເພື່ອປະມວນຜົນຂໍ້ມູນ

```
<?php
```

```
include("conndb.php");
```

```
$p_name=$_POST["txt1"];
```

```
$price=$_POST["txt2"];
```

```
$qty=$_POST["txt3"];
```

```
mysqli_query($conn,"INSERT INTO product(p_name,price,qty)  
values('$p_name','$price','$qty')");
```

```
header("location: viewdata.php");
```

```
?>
```


ການຈັດການຂໍ້ມູນ MySQL



- ຕົວຢ່າງ: ແກ້ໄຂຂໍ້ມູນໃນຕາຕະລາງຊື່ product

ຈາກໜ້າສະແດງສິນຄ້າ viewdata.php ໃຫ້ແກ້ໄຂຕາຕະລາງດ້ວຍການເພີ່ມ
ຈຸດເຊື່ອມໂຍງ ໄປຫາຟອມແກ້ໄຂຂໍ້ມູນ ລຸ່ມນີ້

<td>

<a href="editform.php?pid=<?php echo \$data[0];?>">ແກ້ໄຂ

</td>

ການຈັດການຂໍ້ມູນ MySQL



- ຕົວຢ່າງ: ແກ້ໄຂຂໍ້ມູນໃນຕາຕະລາງຊື່ product

ລະຫັດ	ຊື່ສິນຄ້າ	ລາຄາ	ຈຳນວນ	ປະເພດ	ລືບ	ແກ້ໄຂ
1	ແປ້ບຊີ	3000	15	ເຄື່ອງດື່ມ	ລືບ	ແກ້ໄຂ
2	ນ້ຳດື່ມຫົວເສືອ	3000	10	ເຄື່ອງດື່ມ	ລືບ	ແກ້ໄຂ
3	pizza	50000	2	ອາຫານ	ລືບ	ແກ້ໄຂ
4	bakery	3000	10	ອາຫານ	ລືບ	ແກ້ໄຂ

ໝາຍເຫດ: `ແກ້ໄຂ` ຈະສົງຄາມ pid ຜ່ານທາງ URL

ການຈັດການຂໍ້ມູນ MySQL



- ຕົວຢ່າງ: ຮັບຂໍ້ມູນມາສະແດງຢູ່ໃນຟອມ

```
<?php
```

```
$pid=$_GET["pid"];
```

```
include("conndb.php");
```

```
$result=mysqli_query($conn,"select * from product where  
id='$pid'");
```

```
$data=mysqli_fetch_row($result);
```

```
?>
```

ການຈັດການຂໍ້ມູນ MySQL



ຕົວຢ່າງ:

```
<form action="edit.php" method="post">
<label for="ProductName">ProductName</label>
<input name="txt1" class="form-control" type="text"
value="<?php echo $data[1]; ?>" />
<label for="Price">Price</label>
<input name="txt2" class="form-control" type="text"
value="<?php echo $data[2]; ?>" />
<label for="Qty">Qty</label>
```

ການຈັດການຂໍ້ມູນ MySQL



ຕົວຢ່າງ:

```
<input name="txt3" class="form-control" type="number" value="<?php echo $data[3]; ?>" />
```

```
<button type="submit" class="btn btn-success">ແກ້ໄຂ</button>
```

```
<a href="viewdata.php" class="btn btn-default">ກັບຄືນ</a>
```

```
<input name="pid" type="hidden" value="<?php echo $data[0]; ?>" />
```

```
</form>
```

ການຈັດການຂໍ້ມູນ MySQL



- ຕົວຢ່າງ:

```
<?php  
include("conndb.php");  
$pid=$_POST["pid"];  
$name=$_POST["txt1"];  
mysqli_query($conn,"UPDATE product  
SET p_name='$name' where id='$pid');  
header("location: viewdata.php");
```

ການຈັດການຂໍ້ມູນ MySQL



- ຕົວຢ່າງ: ລຶບຂໍ້ມູນໃນຕາຕະລາງຊື່ product

ຈາກໜ້າສະແດງສິນຄ້າ viewdata.php ໃຫ້ແກ້ໄຂຕາຕະລາງດ້ວຍການເພີ່ມ
ຈຸດເຊື່ອມໂຍງ ໄປຫາໄຟລລຶບຂໍ້ມູນ ລຸ່ມນີ້

<td>

<a href="del.php?pid=<?php echo \$data[0];?>">ລຶບ

</td>

ການຈັດການຂໍ້ມູນ MySQL



- ຕົວຢ່າງ: ແກ້ໄຂຂໍ້ມູນໃນຕາຕະລາງຊື່ product

ລະຫັດ	ຊື່ສິນຄ້າ	ລາຄາ	ຈຳນວນ	ລືບ	ແກ້ໄຂ
1	ແປ້ບຊີ	3000	15	ລືບ	ແກ້ໄຂ
2	ນ້ຳດື່ມຫົວເສືອ	3000	10	ລືບ	ແກ້ໄຂ
3	pizza	50000	2	ລືບ	ແກ້ໄຂ
4	bakery	3000	10	ລືບ	ແກ້ໄຂ

ໝາຍເຫດ: `<a href="del.php?pid=<?php echo $data[0];?>">`
ລືບ ຈະສົງຄ່າ pid ຜ່ານທາງ URL

ການຈັດການຂໍ້ມູນ MySQL



- ຕົວຢ່າງ: ສ້າງໄຟລ del.php

```
<?php
```

```
include("conndb.php");
```

```
$pid=$_GET["pid"];
```

```
mysqli_query($conn,"delete from product where  
id='$pid'");
```

```
header("location: viewdata.php");
```

```
?>
```

ການເຊື່ອມຕໍ່ຖານຂໍ້ມູນ Oracle



- PHP ນຳໃຊ້ຄໍາສັ່ງ PDO ແລະ OCI8 ໃນການເຊື່ອມຕໍ່ Oracle Database 11g
 - OCI8 ຕ້ອງໄດ້ເປີດນຳໃຊ້ OCI8 extension ຢູ່ໃນໄຟລ໌ php.ini ດັ່ງນີ້:

```
874 ;extension=php_oci8.dll          ; Use with Oracle 10gR2 Instant Client
875 extension=php_oci8.dll
876 ;extension=php_oci8_11g.dll      ; Use with Oracle 11gR2 Instant Client
877 extension=php_oci8_11g.dll
878
879 ;extension=php_openssl.dll
880 ;extension=php_pdo_firebird.dll
881 extension=php_pdo_mysql.dll
882 extension=php_pdo_oci.dll
```

ການເຊື່ອມຕໍ່ຖານຂໍ້ມູນ Oracle



- ກວດສອບ

```
<?php  
phpinfo();  
?>
```

oci8

OCI8 Support	enabled
Version	1.4.10
Revision	\$Id: b0984d94e17f7c099470cd0a9404259f2a59da04 \$
Active Persistent Connections	0
Active Connections	0
Oracle Run-time Client Library Version	11.2.0.4.0
Oracle Instant Client Version	10.2

PDO

PDO support	enabled
PDO drivers	mysql, oci, sqlite

PDO_OCI

PDO Driver for OCI 8 and later	enabled
--------------------------------	---------

ການເຊື່ອມຕໍ່ຖານຂໍ້ມູນ Oracle



ຕົວຢ່າງ 1: ການເຊື່ອມຕໍ່ດ້ວຍ PDO

```
<?php
```

```
try {  
    $conn = new PDO("oci:dbname=localhost/XE", "system", "qwerty");  
    $conn->setAttribute(PDO::ATTR_ERRMODE,  
PDO::ERRMODE_EXCEPTION);  
    echo 'Connected to database';  
} catch(PDOException $e) {  
    echo 'ERROR: ' . $e->getMessage();  
}
```

```
?>
```

ການເຊື່ອມຕໍ່ຖານຂໍ້ມູນ Oracle

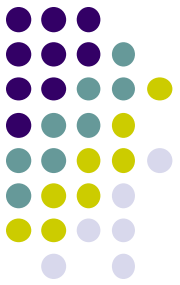


ຕົວຢ່າງ 2: ການເຊື່ອມຕໍ່ດ້ວຍ OCI

```
<?php
$conn = oci_connect("system", "qwerty","localhost/XE");
if (!$conn) {
    $m = oci_error();
    echo $m['message'], "\n";
    exit;
}
else {
    print "Connected to Oracle!";
}
oci_close($conn);
?>
```

ການຈັດການຂໍ້ມູນ Oracle

- ເຂົ້າສູ່ Oracle ດ້ວຍ Web browser



The screenshot shows the Oracle Database XE 11.2 web interface. The browser address bar displays the URL `127.0.0.1:8080/apex/f?p=4950:1:4385753276859`. The interface features a navigation bar with tabs: Home (selected), Storage, Sessions, Parameters, and Application Express. Below the navigation bar, there are four main sections, each with a description and a red button to view more details:

- Storage**: View currently used storage. Button: [Storage >](#)
- Sessions**: View current database sessions. Button: [Sessions >](#)
- Parameters**: View initialization parameters. Button: [Parameters >](#)
- Application Express**: Get started with Oracle Application Express. Button: [Application Express >](#)

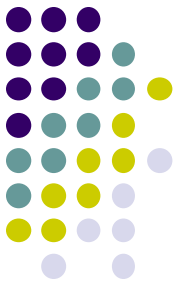
On the right side, there is a **Links** section with the following links:

- > Online Help
- > Learning Library
- > Oracle Technology Network
- > Oracle SQL Developer
- > Oracle Express Edition
- > Oracle Application Express
- > Oracle JDeveloper 11g
- > Pre-built Developer VMs

At the bottom, there are two sections for news: **News** and **OTN News**, both of which are currently empty.

ການຈັດການຂໍ້ມູນ Oracle

- ເຂົ້າສູ່ Oracle ດ້ວຍ Web browser



The screenshot shows the Oracle Database XE 11.2 Application Express interface. The browser address bar displays the URL: 127.0.0.1:8080/apex/f?p=4950:7:4385753276859. The page title is "ORACLE Oracle Database XE 11.2". The navigation tabs include Home, Storage, Sessions, Parameters, and Application Express (which is currently selected). The main content area is titled "Create Application Express Workspace" and contains the following form elements:

- Database User:** Radio buttons for "Create New" (selected) and "Use Existing".
- * Database Username:** A text input field.
- * Application Express Username:** A text input field.
- * Password:** A text input field.
- * Confirm Password:** A text input field.

Buttons for "Cancel" and "Create Workspace" are located at the top right of the form. To the right of the form is a "Getting Started" section with a "Login Here" button and instructions on how to get started with Oracle Application Express, including a list of required information:

- Database Username - Name of the database user to be created
- Application Express Username - Your login name for the Application Express Workspace
- Password - Password of both your database user and Application Express user

Below the list, it states: "Once created, you will be able to login to your Application Express workspace using these credentials". The Oracle logo is visible in the bottom right corner of the page.

ການຈັດການຂໍ້ມູນ Oracle

- ເຂົ້າສູ່ Oracle ດ້ວຍ sqlplus

```
Command Prompt - sqlplus test
C:\Users\financial>sqlplus test

SQL*Plus: Release 11.2.0.2.0 Production on Tue Dec 5 09:11:29 2017

Copyright (c) 1982, 2014, Oracle. All rights reserved.

Enter password:
ERROR:
ORA-28002: the password will expire within 7 days

Connected to:
Oracle Database 11g Express Edition Release 11.2.0.2.0 - 64bit Production

SQL> select * from product;
```

ID	NAME	QTY
1	PEPSI	2
2	MILK	33
3	CANDY	10

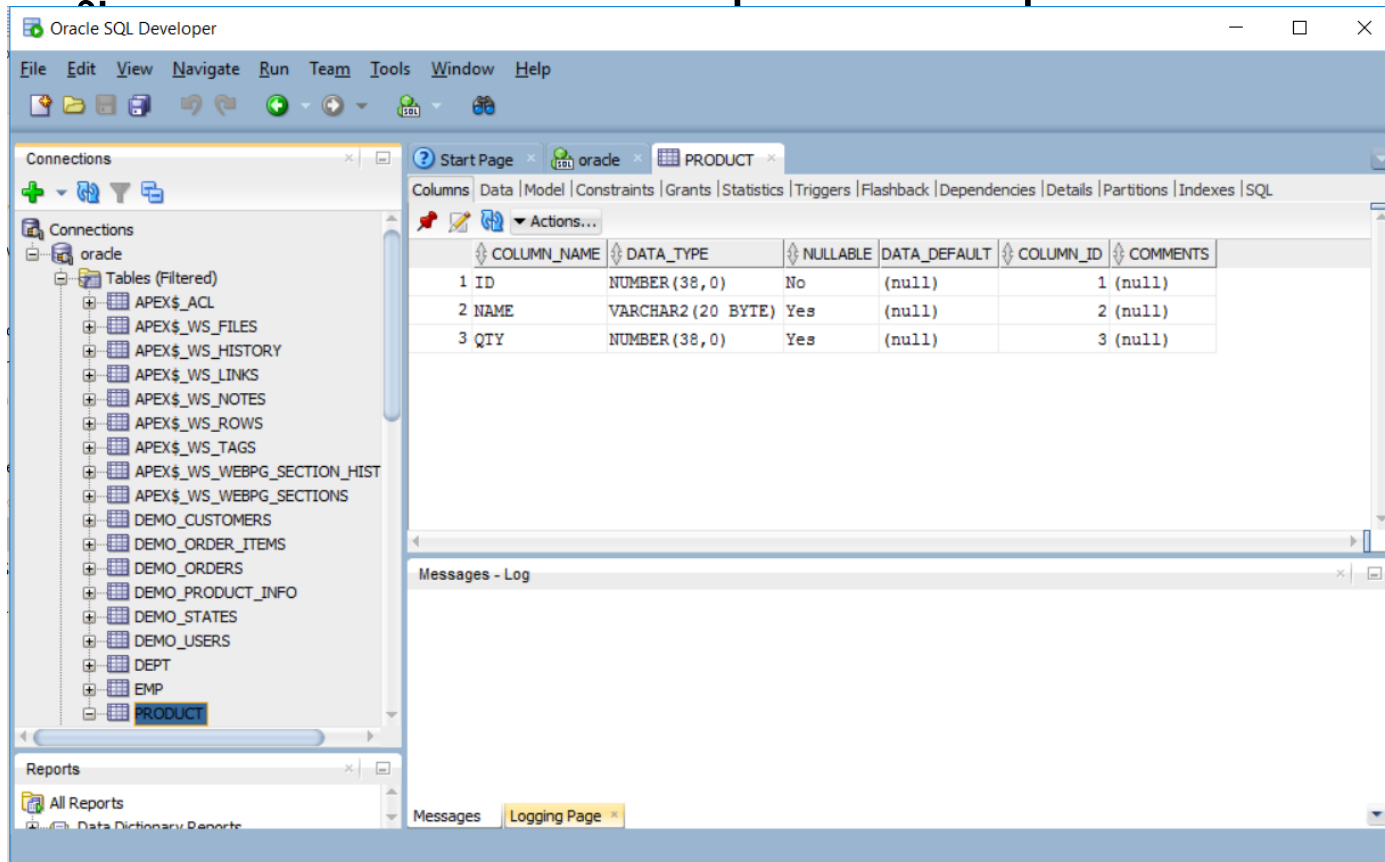
```
SQL>
```

sqlplus / as sysdba

ການຈັດການຂໍ້ມູນ Oracle



- ເຂົ້າສູ່ Oracle ດ້ວຍ sqldeveloper



ການຈັດການຂໍ້ມູນ Oracle



- ຕົວຢ່າງ 1: ສະແດງຂໍ້ມູນ ນຳໃຊ້ OCI8

```
<?php
```

```
// Create connection to Oracle
```

```
$conn = oci_connect("test", "qwerty", "localhost/XE");
```

```
$query = 'select * from product';
```

```
$stid = oci_parse($conn, $query);
```

```
$r = oci_execute($stid);
```

ການຈັດການຂໍ້ມູນ Oracle



- ຕົວຢ່າງ 1: ສະແດງຂໍ້ມູນ ນຳໃຊ້ OCI8

```
// Fetch each row in an associative array
print '<table border="1">';
while ($row = oci_fetch_array($stid,
OCI_RETURN_NULLS+OCI_ASSOC)) {
    print '<tr>';
    foreach ($row as $item) {
        print '<td>'.($item !== null ? htmlentities($item, ENT_QUOTES) :
'&nbsp;').</td>';
    }
    print '</tr>';
}
print '</table>';
```

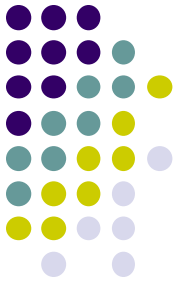
ຂໍ້ມູນອ້າງອີງ



[1] <http://getbootstrap.com/docs/3.3/getting-started/>

[2] https://www.w3schools.com/bootstrap/bootstrap_get_started.asp

[3] <https://www.tutorialrepublic.com/twitter-bootstrap-tutorial/bootstrap-fixed-layout.php>



ព្យាបាល និង ព័ត៌មាន

ឧបករណ៍