Project Description

Creating your dababase application with PHP

It will be sufficient to have an application that

- accommodates all the need of the intended users,
- allows the updating the database information, and
- provides an interface for query answering.

It is hoped that you come up with a system that is user friendly (menu driven, GUI etc.).

Example

- The system: student information system
- Intended user groups: students, professors, cashiers, secretaries
- Students:
  - want to view their record
  - the system should have a feature allowing a student to enter his id and obtains his transcript!

Example

- The system: student information system
- Intended user groups: students, professors, cashiers, secretaries
- Professors:
  - want to get the class listing
  - the system should have a feature allowing a professor to enter his id and class id and obtains the class roster! *But* he should only get the classes that he is teaching

What is “allows the updating the database information”?

- Your database will be stored in Oracle – you will need to provide users a way to update information.
- Example: Student Information System
- We need to allow the registrar office to add new students, new courses, update students’ grades etc.

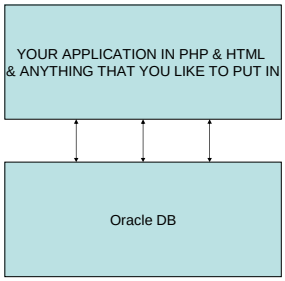
What is “provides an interface for query answering”?

- Summary questions are often posted to a database application. Your application will not be an exception.
- You have thought about the ten most often asked questions in your application.
- You need to provide users who has a question in the ten frequently asked questions to ask your system one of the ten questions and get the answer from the system.

NOTE

- There is not always a clear distinction between “accommodates all the need of the intended users” and “provides an interface for query answering”. One might be used for another.

Your application



PHP – Oracle Examples

- See the link from class note website
- http://www.cs.nmsu.edu/~tson/classes/fall04-482/PHP
- Too many websites on PHP to list here

PHP – An Introduction

- Web programming
- Simple yet good enough
- Basic types:
  - **Scalar types:** boolean, integer, float, string
  - **Compound types**: array, object
  - **Special types**: resource, NULL
- Variables begins with $ - no need for declaration (bad:-)
- Control:
  - if

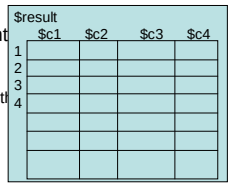
PHP with Oracle

- *Create a connection to Oracle* (session)
  ```
  $conn = ocilogon( $name, $pwd, "cs482" );
  ```
- *Prepare a statement*
  ```
  $cmdstr = "select * from pi";
  $parsed = ociparse($conn, $cmdstr);
  ```
- *Execute a statement*
  ```
  ociexecute($parsed);
  ```
- *Processing the result*

PHP – Oracle Display Result (Example 1)

- *Fetch the result*
  ```
  $nrows = ocifetchstatement
  ```
- $result
  - is like a two dimensions array
  - $result[$name][$n] – the value of th
- *Example*

```
for ($i = 0; $i < $nrows; $i++ )
{
   echo $results["IID"][$i] ;
   echo $results["OID"][$i] ;
   echo $results["ICOST"][$i] ;
   echo "\n";
}
```



Column Name

Row number

PHP – Oracle
Dynamic column name (Example 2)

```
$ncols = OCINumCols($parsed);
for ($i = 0; $i < $nrows; $i++ )
{
  for ($j = 1; $j<= $ncols; $j++)
  {
    $col_name  = OCIColumnName($parsed,
   $j);
     echo  $results[$col_name][$i] . "  ";
   }
```

Get the number of columns

Concatenation operator

Dynamic Command String
(Example 3)

```
$tablename
$oid
$sid
$eid
```

Table name
Order id
Supplier id
Employee id

```
$cmdstr = "insert into " .
    $tablename . "  values(" . $oid .
    "," . $eid . ", " . $sid . ")";
```

Create the command string

```
$parsed = ociparse($conn,
    $cmdstr);
ociexecute($parsed1);
```

Parse & execute

PHP – Function (Example 5)

```
<?php
// do something
display($v11,$v12,$v13)
// do something else
display($v21,$v22,$v23)
function display($arg1,$arg2,$arg3)
{
   function's body
}
?>
```

What is enough?

- A program that allows one to do all the required tasks:
  - Updating data (your application has tables t1, t2, t3, t4 – then the system will have to allow users to enter, modify, or delete data in all four tables)
  - Asking queries (display answer on screen)

Screen dump example (1)

application-team-XX

1. Updating
2. Querying
3. Exit

Select 1 – A new screen with 1,2,…,n tables appear for selection

Screen dump example (2)

application-team-XX

1. Student table
2. Professor table
3. Course table
4. Exit

Select 2 – display the professor table, ask whether the user want to enter new professor, edit some information, or delete

Screen dump example (3)

application-team-XX

1. Enter new
2. Modify old
3. Delete

Select: …..

And so it goes ….

Nicer – but not required!

- GUI interface
- Menu driven