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#!/usr/bin/perl -w

use DBI;          # Database interface
use strict;       # stop stupid mistakes
use diagnostics;  # verbose error messages
use constant ME => "Yeming’s DBI example";
use constant ID => "Yeming’s Oracle Password";


my $dbh; # database handle (similar to a file handle)
my $sth; # database output
my $find; # for user input
my @data; # array to hold ...
my ($id, $name, $title, $phone); # fields in database



# Connect
#   host     must be torch.cs.dal.ca
#   database must be your username (that’s what the HelpDesk made for you)
#   port     must be 3306
#   last two params are your username and password
$dbh = DBI -> connect
  (’dbi:mysql:host=torch;database=yeming;port=3306’,’yeming’,ID)
  ||
  die "Database connection not made: $DBI::errstr\n";


# Create new table (employees)
  $dbh->do("DROP TABLE employees");
  $dbh->do("CREATE TABLE employees ( id INTEGER NOT NULL,
                                     name VARCHAR(128),
                                     title VARCHAR(128),
                                     phone CHAR(8)
                                   )");


# Populate table
  $dbh->do("INSERT "
           . " INTO employees "
           . " VALUES(’8’, ’yeming’, ’4173’, ’3442497’)");
  $dbh->do("INSERT "
           . " INTO employees "
           . " VALUES(’6’, ’jamie’, ’4173’, ’3442495’)");
  $dbh->do("INSERT "
           . " INTO employees "
           . " VALUES('4', 'jacky', '4445', '3442493')");



# Get data from table
#  PREPARE is first of two stages,
#  EXECUTE is second stage and it will replace ? with its param
  $sth = $dbh->prepare('SELECT * FROM employees WHERE name=?');


  print ME.": Enter name to find in database> ";
  $find=<STDIN>;  # read input (by default until '\n')
  chomp $find;    # chomp removes trailing '\n' if there is one

  $sth->execute($find)
    or die "Couldn't execute statement". $sth->errstr;

  if (@data=$sth->fetchrow_array()) {  # if there is one row
      do {                             # if there is more than one row
          ($id, $name, $title, $phone) = @data;
          print "  ID: \"$id\", "       .
                "NAME: \"$name\", "   .
                "TITLE: \"$title\", " .
                "PH: \"'$phone\"\n";
         } while (@data=$sth->fetchrow_array());
  } else {
      print "\"$find\" was not found in the database\n";
  }
  print "\n";



# Remove data from table

  $sth->execute('jacky')  # Still using the PREPARE above
  ||
  die "Couldn't execute statement name='jacky' ". $sth->errstr;
  print "Before deletion:\n " .
        "There are ".scalar($sth->rows)." records with name='jacky'\n";


  $dbh->do("DELETE "
           . " FROM employees "
           . " WHERE name='jacky'")
  ||
  die "Couldn't execute delete statement: ". $sth->errstr;
  $sth->execute('jacky');
  print "After deletion:\n " .
        "There are ".scalar($sth->rows)." records with name='jacky'\n";




# Update/Alter data in table
  $dbh->do("UPDATE "
           . " employees "
           . " SET "
           . "  phone=4021828 "
           . "   WHERE name='yeming'");


  $name='yeming';
  $sth->execute($name)   # Still using PREPARE from above
  ||
  die "Couldn't execute update statement". $sth->errstr;


  print "After some data was deleted, and some updated:\n" .
        " rows with name='yeming'\n";
  while(@data=$sth->fetchrow_array()) {
      ($id, $name, $title, $phone) = @data;
      print " ID:\"$id\"  NAME:\"$name\"  TITLE:\"$title\" PH:\"$phone\"\n";
  }



# Close database handle
  $dbh->disconnect() || warn "$DBI::errstr\n";

## EOF ##
```

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Yeming’s DBI example: Enter name to find in database> foobar
  "foobar" was not found in the database

Before deletion:
 There are 1 records with name=’jacky’
After deletion:
 There are 0 records with name=’jacky’
After some data was deleted, and some updated:
 rows with name=’yeming’
 ID:"8"  NAME:"yeming"  TITLE:"4173" PH:"4021828"
```

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Yeming’s DBI example: Enter name to find in database> jamie
  ID: "6", NAME: "jamie", TITLE: "4173", PH: "’3442495"

Before deletion:
 There are 1 records with name=’jacky’
After deletion:
 There are 0 records with name=’jacky’
After some data was deleted, and some updated:
 rows with name=’yeming’
 ID:"8"  NAME:"yeming"  TITLE:"4173" PH:"4021828"
```