

Solution to the exam in Web Publishing with Databases, Spring 2004

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Solution to Exercise 1 (10 percent) - HTML

Exercise 1.1 (10 percent)

```
<html>
  <head><title>Log into Diners' Society</title></head>
  <body>
  <img align=right src=champagne.gif>
  <h1>Log into Diners Society</h1>
  <p>Please enter email and password to log into Diners Society:</p>
  <form action=dologin.php>
    <table>
      <tr>
        <td>Email:</td><td><input type=text name=email></td>
      </tr>
      <tr><td>Password:</td>
        <td><input type=password name=passwd></td>
      </tr>
      <tr><td></td><td><input type=submit value='Log in'></td></tr>
    </table>
  </form>
  <hr />
  <table width=100%>
    <td align=left>
      <a href=login.php>Diners' Society home</a>
    </td>
    <td align=right>
      <a href='mailto:webmaster@DinersSociety.com'>webmaster@DinersSociety.com<
    </td>
  </table>
</body>
</html>
```

Solution to Exercise 2 (15 percent) - PHP

Exercise 2.1 (7 percent)

```
function pagehead ($title, $membername) {
  echo "<html><head><title>$title</title></head>
    <body><img align=right src=champagne.gif>
    <h1>$title</h1>";
  if ($membername != "") {
    echo "<p>$membername is logged in.
      <a href=login.php>Log out</a></p>";
  }
}
```

Exercise 2.2 (8 percent)

```
function pagefoot ($mid, $passwd) {
  echo "<hr />
    <table width=100%>
    <td align=left>
```

```

        <a href='index.php?mid=$mid&passwd=$passwd'>Diners'
        Society home</a></td>
    <td align=right>
        <a href='mailto:webmaster@DinersSociety.com'>"
        . "webmaster@DinersSociety.com</a></td>
    </table>
</body>
</html>";
}

```

Solution to Exercise 3 (15 percent) - Regular expressions

Exercise 3.1 (5 percent)

```
[a-z0-9][a-z0-9][a-z0-9]+
```

Exercise 3.2 (5 percent)

```

function validate_password ($passwd) {
    if (ereg ('^[a-z0-9][a-z0-9][a-z0-9]+$' , $passwd))
        return;
    pagehead("Password not well-formed", "");
    echo "The password is not a well-formed password. Go back
        and enter a well-formed password.";
    pagefoot("", "");
    exit();
}

```

Exercise 3.3 (5 percent)

```
([0-1]?[0-9]|2[0-4]):[0-5][0-9]
```

Solution to Exercise 4 (25 percent) - SQL

Exercise 4.1 (4 percent)

date	time	restaurant
2004-05-19	19:00	De Gaulle
2004-05-27	19:30	Le Basilic

Exercise 4.2 (4 percent)

```

CREATE TABLE Diner (
    vid          int NOT NULL, INDEX (vid),
    mid          int NOT NULL, INDEX (mid),
    rating       int,
    PRIMARY KEY (vid, mid),
    FOREIGN KEY (vid) REFERENCES Visit (vid),
    FOREIGN KEY (mid) REFERENCES Member (mid)
) type = InnoDB;

```

or

```

CREATE TABLE Diner (
    vid          int NOT NULL,
    mid          int NOT NULL,
    rating       int,

```

```
    PRIMARY KEY (vid, mid),
);
```

Exercise 4.3 (4 percent)

```
INSERT INTO Diner (vid, mid) VALUES (1,3);
INSERT INTO Diner (vid, mid) VALUES (1,5);
INSERT INTO Diner (vid, mid) VALUES (1,4);
```

Exercise 4.4 (4 percent)

```
UPDATE Diner SET rating = 5
WHERE vid = 1 AND mid = 2;
```

Exercise 4.5 (4 percent)

```
SELECT Visit.vid, date, time, restaurant, COUNT(mid)
FROM Visit LEFT JOIN Diner
ON Visit.vid = Diner.vid
WHERE date >= now()
GROUP BY Visit.vid
ORDER BY date, time
```

Exercise 4.6 (5 percent)

```
SELECT Visit.vid, date, time,
restaurant, COUNT(mid), AVG(rating)
FROM Visit LEFT JOIN Diner
ON Visit.vid = Diner.vid
WHERE date < now()
GROUP BY Visit.vid
ORDER BY date, time
```

Solution to Exercise 5 (35 percent) - Web-service

Exercise 5.1 (7 percent)

```
function checkpasswd ($mid, $passwd) {
    validate_int ($mid);
    validate_password ($passwd);
    $query = "SELECT name FROM Member
              WHERE mid = '$mid' AND password = '$passwd'";
    $rows = mysql_query ($query);
    if (mysql_fetch_row ($rows)) return;
    header ("Location: login.php");
    exit;
}
```

Exercise 5.2 (7 percent)

##A##

```
echo "<h3>Past visits:</h3> $tablestart
      <td><b>Rating</b></td><td><b>Action</b></td>";
```

##B##

```
echo "<tr><td>$date</td><td>$time</td><td>$restaurant</td>
      <td align=center>$diners</td>
      <td>$rating</td>
```

```
        <td><a href='rate.php?vid=$vid&mid=$mid&passwd=$passwd'>Rate</a>
    </td></tr>";
```

Exercise 5.3 (7 percent)

Form variable names: mid, passwd, date, time, and rest.

The file `addvisit.php`

```
<?php
include ("dslib.php");
mydb_connect ();
checkpasswd ($mid, $passwd);
validate_date ("$date");
validate_time ("$time");
validate_name ("$rest");
$query = "INSERT INTO Visit (restaurant, date, time)
        VALUES ('$rest', '$date', '$time')";
mysql_query ($query);
$passwd = urlencode ($passwd);
header ("Location: index.php?mid=$mid&passwd=$passwd");
?>
```

Exercise 5.4 (7 percent)

##C##

```
while ($row = mysql_fetch_row ($rows)) {
    $rowmid = $row [0];
    $name   = $row [1];
    $rating = $row [2];
    if ("$rowmid" == "$mid") {
        echo "<tr><td>$name:</td><td>
            <input type=text name=rating value=$rating size=2>
            <input type=submit value=Rate>
            </td></tr>";
    } else {
        echo "<tr><td>$name:</td><td>$rating</td></tr>";
    }
}
```

Exercise 5.5 (7 percent)

```
<?php
include ("dslib.php");
mydb_connect ();
checkpasswd ($mid, $passwd);
validate_int ($vid);
validate_int ($rating);

mysql_query
("UPDATE Diner set rating='$rating'
 WHERE vid = '$vid' AND mid = '$mid'");

header ("Location: index.php?mid=$mid&passwd=$passwd");
?>
```