ASSIGNMENT - 4

1. JDBC in Database - driven applications and Connection pooling:

1) Define the DataSource in

Content . XML :

<Resource name = "jdbc/myd b" auth = "container"
type = "javax.sql. Datasource" driverclass name = "com . sql.,
url = "jdbc . mysql :
username = "root" password = "password "

Executing SQL Queries:

Statement Stmt = Conn. Createstatement ();
Resultset rs = Stmt. executequery ("selet * from Users");

Example Code:

prepared statement pstmt = Conn. preparestatement
("SELECT * From Users Where Id = ?");
pstmt . setInt (1, 1);
Resultset rs = pstmt . execute Query ();

while (rs . next ()) {
System. out. println ("User ID: " + rs . get Int ("id"));
System. out. println ("username : " + rs. getString ("username"));
}
Conn . close ();

Output:

User ID : 1
Username : johndoe.

2.

2. Jsp lifecycle phases and embedding java code:

The Jsp lifecycle consists of the
i) Translation phase, compilation phase, initialization phase, request processing phase, destroy phase.

Embedding java code:

1. Scriptlets (<% ... %>):

```
<% int count = 0; %>
```

2. Declarations (<%! ... %>):

```
<%! int count = 0; %>
```

3- Expression (<%= ... %>)

```
<%= "Hello, world!" %>
```

Example output:

Jsp lifecycle phase:.

```
<%= "welcome to our website!" %>
```

output: welcome to our website.

Jsp using Scriplet:

```
<%
    int visitorCount = 10;
    out.println("visitor count: " + visitorCount);
%>
```

output:

visitor count: 10.

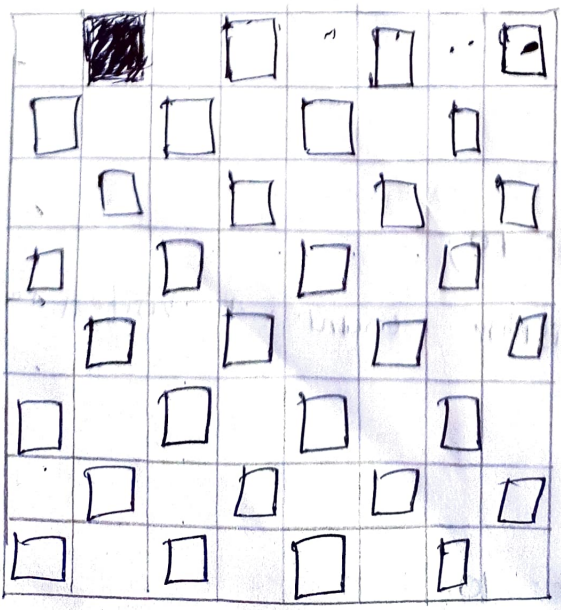
3. PHP program to generate Chessboard

To generate Chessboard with alternating colors using html tables in php

Code:

```
echo "<table width = '400px' height = '400px'
cellspacing = '0' cellpadding = '0'>";
for ($row = 0; $row < 8 ; $row ++)
echo "<tr>";
for ($col = 0; $col < 8; $col ++) {
$color = ($row + $col)%2 = 0 ? 'white' : 'black';
echo "<style = 'width = 'width': 30px; height= 30px;
background - color : $color'></td>";
}
echo "</tr>";
}
echo "</table>".
```

Output:



4. PHP application for extracting patterns and XML generation:

1. Read the file content:

$file_content = file_get_content('input.txt');

2. Use regular expressions to extract data:

preg_match_all("/[a-z0-9._]+@[a-z0-9\.]+[a-z]{2,6}/", filecontent, $emails);

preg_match_all("/\d{3}-\d{3}-\d{4}/", filecontent, $phone_numbers);

4. DTD vs XML schema:

DTD (Document type definition):

→ Simpler and easier to define.

→ does not support data types.

Eg code:

```
$xml = new simpleXML('<data></data>');
foreach ($emails[0] as $email) {
    $xml->addchild('email', $email);
}
foreach ($phone_numbers[0] as $phone) {
    $xml->add_child('phone', $phone);
}
$xml->asXML('output.xml');
```

Output:

```
<data>
<email>johndoe@example.com</email>
<email>jandoe@example.net</email>
<phone>123-456-7890</phone>
<phone>987-654-3210</phone>
</data>
```