1a.html
```html
<html>
<form action="http://localhost/cgi-bin/1a.pl">
   <center>
   <input type=submit value=Show_Server_Info/>
   </center>
</form>
</html>
```

1a.pl
```perl
#!C:\xampp\perl\bin\perl.exe
print "Content-Type: text/html;charset=iso-8859-1;\n\n";
#this is a here-document
print "<html><table border=1><tr><th>ENV_VARIABLES</th><th>Value</th></tr>";
foreach $i(sort keys %ENV)
{
print "<tr><td>$i</td><td>$ENV{$i}</td></tr>";
}
print "</table></html>";
```

1b.html
```html
<html>
<form action="http://localhost/cgi-bin/1b.pl">
<!-- input command name-->
<input type=text name=com>
<input type=submit value=submit />
</form>
</html>
```

1b.pl
```perl
#!"\xampp\perl\bin\perl.exe"
use CGI':standard';
print "Content-type:text/html\n\n";
$c=param('com');
system($c);
exit(0);
```

2a.html
```html
<html>
<form action="http://localhost/cgi-bin/2a.pl">
<center>
<h2>Enter your name:</h2>
<input type=text name=name>
<input type=submit value=sumbit>
</center>
```

```
</form>
</html>
```

2a.pl

```
#!C:\xampp\perl\bin\perl.exe
use strict;
use warnings;
use CGI qw(:standard);

my $cmd=param('name');
my @greet=("Hello","Hi","Nice to meet you");
my $index=int rand scalar@greet;
print"Content-type: text/html;charset=iso-8859-1;\n\n";
print<<"here";
<html>
<center>
<h2>$cmd,$greet[$index]</h2>
</center>
</html>
here
```

2b.html

```
<html>
   <body>
      <form action="http://localhost/cgi-bin/2b.pl">
         <input type="submit" value="Show">
      </form>
   </body>
</html>
```

2b.pl

```
#!C:\xampp\perl\bin\perl.exe
use CGI':standard';
print "Content-type: text/html;charset=iso-8859-1;\n\n";

open(FILE,'<count.txt');
$count=<FILE>;
close(FILE);
$count++;
open(FILE,'>count.txt');
print FILE "$count";
print "This page has been viewed $count times";
```

3.html

```
<form action="http://localhost/cgi-bin/3.pl">
   <center>
      <input type="submit" value="Check status">
   </center>
```

```
</form>
```

3.pl

```perl
#!C:\xampp\perl\bin\perl.exe
use CGI;
my $cgi=CGI->new;
my $cookie_name = 'webmaster_logged_in';
my $status=$cgi->cookie($cookie_name);
print "Content-type:text/html;\n\n";
if($status){
    print "Logged in";
}else{
    print "Logged out";
}
($s,$m,$h)=localtime(time);
print "<br>";
if($h<12){
    print "Good Morning";
}else{
    print "Good Evening";
}
```

4.html

```html
<form action="http://localhost/cgi-bin/4.pl">
    <center>
        <input type="submit" value="Display Time">
    </center>
</form>
```

4.pl

```perl
#!C:\xampp\perl\bin\perl.exe
use CGI":standard";
print "Refresh:1\n";
print "Content-type: text/html;\n\n";
($s,$m,$h)=localtime(time);
print  br "The current server time is $h:$m:$s";
print br"in words, the time is-$h hours,$m minutes and $s seconds";
```

5. Html

```html
<html>
<head>
   <title>Database Table Viewer</title>
</head>
<body>
   <h2>Enter Database and Table Name</h2>
   <form action="display.php" method="post">
      <label for="dbname">Database Name:</label>
```

```html
        <input type="text" id="dbname" name="dbname" required><br><br>

        <label for="tablename">Table Name:</label>
        <input type="text" id="tablename" name="tablename" required><br><br>

        <input type="submit" value="Display Table">
    </form>
</body>
</html>
```

5.php
```php
<?php
$dbname = $_POST['dbname'];
$tablename = $_POST['tablename'];

$servername = "localhost";
$username = "root";
$password = "";

$conn = new mysqli($servername, $username, $password, $dbname);

if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

$sql = "SELECT * FROM $tablename";
$result = $conn->query($sql);

if ($result->num_rows > 0) {
    echo "<h2>Contents of Table: $tablename</h2>";
    echo "<table border='1'>";

    $columns = $result->fetch_fields();
    echo "<tr>";
    foreach ($columns as $column) {
        echo "<th>" . $column->name . "</th>";
    }
    echo "</tr>";

    while ($row = $result->fetch_assoc()) {
        echo "<tr>";
        foreach ($row as $value) {
            echo "<td>" . htmlspecialchars($value) . "</td>";
        }
        echo "</tr>";
    }
    echo "</table>";
```

```php
} else {
    echo "No data found in the table.";
}
$conn->close();
?>
```

6.html

```html
<html>
<head>
    <title>Insert Data</title>
</head>
<body>
    <h2>Insert New Record</h2>
    <form action="insert.php" method="post">
        <label for="name">Name:</label>
        <input type="text" id="name" name="name" required><br><br>

        <label for="age">Age:</label>
        <input type="number" id="age" name="age" required><br><br>

        <input type="submit" value="Insert">
    </form>
</body>
</html>
```

6.php

```php
<?php
$name = $_POST['name'];
$age = $_POST['age'];
$servername = "localhost";
$username = "root";
$password = "";
$dbname = "test";

$conn = new mysqli($servername, $username, $password, $dbname);

if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

$sql = "INSERT INTO info (name, age) VALUES ('$name', $age)";

if ($conn->query($sql) === TRUE) {
    echo "New record created successfully";
} else {
    echo "Error: " . $sql . "<br>" . $conn->error;
}
```

```php
$conn->close();
?>
```

7.html

```html
<html>
<head>
   <title>Database Table Viewer</title>
</head>
<body>
   <h2>Enter Database and Table Name</h2>
   <form action="query.php" method="post">
      <label for="dbname">Database Name:</label>
      <input type="text" id="dbname" name="dbname" required><br><br>

      <label for="query">Query:</label>
      <input type="text" id="query" name="query" required><br><br>

      <input type="submit" value="Display Table">
   </form>
</body>
</html>
```

7.php

```php
<?php
$dbname = $_POST['dbname'];
$query=$_POST['query'];
$servername = "localhost";
$username = "root";
$password = "";

$conn = new mysqli($servername, $username, $password, $dbname);

if ($conn->connect_error) {
   die("Connection failed: " . $conn->connect_error);
}

$result = $conn->query($query);

if ($result->num_rows > 0) {
   echo "<h2>Contents of Table:</h2>";
   echo "<table border='1'>";

   $columns = $result->fetch_fields();
   echo "<tr>";
   foreach ($columns as $column) {
      echo "<th>" . $column->name . "</th>";
   }
```

```php
        echo "</tr>";

        while ($row = $result->fetch_assoc()) {
            echo "<tr>";
            foreach ($row as $value) {
                echo "<td>" . htmlspecialchars($value) . "</td>";
            }
            echo "</tr>";
        }
        echo "</table>";
    } else {
        echo "No data found in the table.";
    }
    $conn->close();
    ?>
```

8.html
```html
<html>
<head>
    <title>Insert Data</title>
</head>
<body>
    <h2>Insert New Record</h2>
    <form action="insert_book.php" method="post">

        <label for="id">Book_id:</label>
        <input type="number" id="id" name="id" required><br><br>

        <label for="name">Book Name:</label>
        <input type="text" id="name" name="name" required><br><br>

        <label for="a_name">Author Name:</label>
        <input type="text" id="a_name" name="a_name" required><br><br>

        <label for="edition">Edition:</label>
        <input type="number" id="edition" name="edition" required><br><br>

        <label for="publisher">Publisher:</label>
<input type="text" id="publisher" name="publisher" required><br><br>

        <input type="submit" value="Insert">
    </form>
</body>
</html>
```

8.php
```php
<?php
```

```php
$id = $_POST['id'];
$name = $_POST['name'];
$author = $_POST['a_name'];
$edition = $_POST['edition'];
$publisher = $_POST['publisher'];
$servername = "localhost";
$username = "root";
$password = "";
$dbname = "test";

$conn = new mysqli($servername, $username, $password, $dbname);

if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

$sql = "INSERT INTO books VALUES ($id, '$name','$author',$edition,'$publisher')";

if ($conn->query($sql) === TRUE) {
    echo "New record created successfully";
} else {
    echo "Error: " . $sql . "<br>" . $conn->error;
}
$conn->close();
?>
```

9.html
```html
<html>
<head>
    <title>Book Search</title>
</head>
<body>
    <h2>Search for a Book</h2>
    <form action="search.php" method="post">
        <label for="title">Book Title:</label>
        <input type="text" id="title" name="title" required><br><br>

        <input type="submit" value="Search">
    </form>
</body>
</html>
```

9.php
```php
<?php
$title = $_POST['title'];

$servername = "localhost";
```

```php
$username = "root";
$password = "";
$dbname = "library";

$conn = new mysqli($servername, $username, $password, $dbname);

if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

$sql = "SELECT * FROM books WHERE name LIKE '%$title%'";
$result = $conn->query($sql);

if ($result->num_rows > 0) {
    echo "<h2>Search Results for '$title'</h2>";
    echo "<table border='1'>";

    $columns = $result->fetch_fields();
    echo "<tr>";
    foreach ($columns as $column) {
        echo "<th>" . $column->name . "</th>";
    }
    echo "</tr>";
    while ($row = $result->fetch_assoc()) {
        echo "<tr>";
        foreach ($row as $value) {
            echo "<td>" . htmlspecialchars($value) . "</td>";
        }
        echo "</tr>";
    }
    echo "</table>";
} else {
    echo "<h2>No results found for '$title'</h2>";
}
$conn->close();
?>
```

10a. HTML:

```html
<html>
<head>
<title>Greetings</title>
</head>
<body>
<form action="greet" method="post">
<h2>Enter your name:</h2>
```

```html
                <input type=text name=name />
                <input type=submit value=submit />
</form>
</body>
</html>
```

Servlet:

```java
import java.io.PrintWriter;
import java.util.Random;
private static final String[] GREETINGS = {
            "Hello", "Welcome", "Hi there", "Greetings", "Hey", "Good to see
you"
        };
protected void doGet(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
            // TODO Auto-generated method stub
            response.getWriter().append("Served at:
").append(request.getContextPath());
            String username = request.getParameter("name");
        Random random = new Random();
        String greeting = GREETINGS[random.nextInt(GREETINGS.length)];
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();
        out.println("<html><body>");
        out.println("<h2>" + greeting + ", " + username + "!</h2>");
        out.println("</body></html>");
    }
```

10b.HTML:

```html
<html>
<head>
<title>BG Colour Changer</title>
</head>
<body>
<h2>Select a Background Color</h2>
    <form action="color" method="POST">
        <label for="color">Choose a color:</label>
        <input type="color" id="color" name="color" required>
        <button type="submit">Apply Color</button>
    </form>
</body>
</html>
```

Servlet:

```java
import java.io.PrintWriter;
protected void doPost(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
            // TODO Auto-generated method stub
            doGet(request, response);
            String color = request.getParameter("color");
        response.setContentType("text/html");
```

```
        PrintWriter out = response.getWriter();
        out.println("<html>");
        out.println("<head><title>Background Color Changer</title></head>");
        out.println("<body style='background-color: " + color + ";'>");
        out.println("<h2>The background color has been set to: " + color +
"</h2>");
        out.println("<a href='bgcolour.html'>Choose another color</a>");
        out.println("</body></html>");
    }
```

11.HTML:

```
<html>
<head>
<title>Greeting message</title>
</head>
<body>
<h2>Welcome!</h2>
    <p>Click the button below to get a greeting based on the server's current
time:</p>
    <form action="greeting" method="GET">
        <button type="submit">Get Greeting</button>
    </form>
</body>
</html>
```

Servlet:

```
import java.io.PrintWriter;
import java.time.LocalTime;
protected void doGet(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
        // TODO Auto-generated method stub
        response.getWriter().append("Served at:
").append(request.getContextPath());
        LocalTime currentTime = LocalTime.now();
    String greeting;
    if (currentTime.isBefore(LocalTime.NOON)) {
        greeting = "Good Morning!";
    } else if (currentTime.isBefore(LocalTime.of(17, 0))) {
        greeting = "Good Afternoon!";
    } else {
        greeting = "Good Evening!";
    }
    response.setContentType("text/html");
    PrintWriter out = response.getWriter();
    out.println("<html>");
    out.println("<head><title>Greeting Message</title></head>");
    out.println("<body>");
    out.println("<h2>" + greeting + "</h2>");
    out.println("<p>The current server time is: " + currentTime + "</p>");
    out.println("<a href='greeting.html'>Back to Home</a>");  // Link to go
back to the HTML page
    out.println("</body></html>");
    }
```

12.HTML:

```html
<html>
<head>
<title>Cookie Creator</title>
</head>
<body>
<h2>Enter Your Name</h2>
    <form action="cookie" method="POST">
        <label for="username">Name:</label>
        <input type="text" id="username" name="username" required>
        <button type="submit">Submit</button>
    </form>
</body>
</html>
```

Servlet:

```java
import java.io.PrintWriter;
import javax.servlet.http.Cookie;
protected void doPost(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
        // TODO Auto-generated method stub
        doGet(request, response);
        String username = request.getParameter("username");

    Cookie userCookie = new Cookie("username", username);
    userCookie.setMaxAge(60 * 60 * 24); // Set cookie to expire in 24 hours
    response.addCookie(userCookie);

    response.setContentType("text/html");
    PrintWriter out = response.getWriter();
    out.println("<html>");
    out.println("<head><title>Cookie Example</title></head>");
    out.println("<body>");

    out.println("<h2>Hello, " + username + "!</h2>");
    out.println("<p>Your name has been saved in a cookie.</p>");

    out.println("<h3>Current Cookies:</h3>");
    Cookie[] cookies = request.getCookies();
    if (cookies != null) {
        for (Cookie cookie : cookies) {
            out.println("<p>" + cookie.getName() + " = " + cookie.getValue() +
"</p>");
        }
    } else {
        out.println("<p>No cookies found.</p>");
    }

    out.println("</body></html>");
    }
```

13.HTML:

```html
<html>
<head>
    <title>Session Information</title>
</head>
<body>
    <h2>Click the button to start a session and display session information</h2>
    <form action="session" method="post">
        <input type="submit" value="Display Session Information">
    </form>
</body>
</html>
```

Servlet:

```java
import java.util.Date;
import java.io.PrintWriter;
import javax.servlet.http.HttpSession;
protected void doPost(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
            // TODO Auto-generated method stub
            response.setContentType("text/html");
        HttpSession session = request.getSession(true);

        String sessionId = session.getId();
        long creationTime = session.getCreationTime();
        long lastAccessedTime = session.getLastAccessedTime();

        PrintWriter out = response.getWriter();
        out.println("<html><head><title>Session
Information</title></head><body>");
        out.println("<h2>Session Information</h2>");
        out.println("<p>Session ID: " + sessionId + "</p>");
        out.println("<p>Creation Time: " + new Date(creationTime) + "</p>");
        out.println("<p>Last Accessed Time: " + new Date(lastAccessedTime) +
"</p>");
        out.println("</body></html>");
        out.close();
    }
```

14.HTML:

```html
<html>
<head>
    <title>Server Information</title>
</head>
<body>
    <h2>Click the button to view server request information</h2>
    <form action="requestsession" method="post">
        <input type="submit" value="Get Server Information">
    </form>
</body>
</html>
```

Servlet:

```java
import java.io.PrintWriter;
protected void doPost(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
            // TODO Auto-generated method stub
            doGet(request, response);
            response.setContentType("text/html");

        String requestMethod = request.getMethod();
        String requestURL = request.getRequestURL().toString();
        String protocol = request.getProtocol();
        String remoteAddr = request.getRemoteAddr();

        PrintWriter out = response.getWriter();
        out.println("<html><head><title>Server Information</title></head><body>");
        out.println("<h2>Server Request Information</h2>");
        out.println("<p>Request Method: " + requestMethod + "</p>");
        out.println("<p>Request URL: " + requestURL + "</p>");
        out.println("<p>Protocol: " + protocol + "</p>");
        out.println("<p>Remote Address: " + remoteAddr + "</p>");
        out.println("</body></html>");
        out.close();
    }
```

15.HTML:

```html
<html>
<head>
    <title>User Information</title>
</head>
<body>
    <h2>Enter Your Information</h2>
    <form action="userinfo" method="post">
        <label for="username">Username:</label>
        <input type="text" id="username" name="username" required><br><br>

        <label for="address">Address:</label>
        <input type="text" id="address" name="address" required><br><br>

        <input type="submit" value="Submit">
    </form>
</body>
</html>
```

Servlet:

```java
import java.io.PrintWriter;
protected void doPost(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
            // TODO Auto-generated method stub
            doGet(request, response);
            response.setContentType("text/html");

        String username = request.getParameter("username");
```

```java
        String address = request.getParameter("address");

        PrintWriter out = response.getWriter();
        out.println("<html><head><title>User Information</title></head><body>");
        out.println("<h2>User Information</h2>");
        out.println("<p>Username: " + username + "</p>");
        out.println("<p>Address: " + address + "</p>");
        out.println("</body></html>");
        out.close();
    }
```