Practical No. 7(a)
Q. Create a JSP page to demonstrate the use of Expression Language.

index.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
        <title>Index</title>
    </head>
    <body>
        <h3>Welcome to Index Page</h3>
        <%
            session.setAttribute("user", "Admin");
        %>
        <%
            Cookie ck = new Cookie("name","mycookie");
            response.addCookie(ck);
        %>
        <form action="ExpressionLanguage.jsp" >
            Enter Name : <input type="text" name="name" /><br><br>
            <input type="submit" value="Submit" />
        </form>
    </body>
</html>
```

ExpressionLanguage.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
<title>Expression Language</title>
</head>
<body>
    Welcome, ${param.name} <br>
    <b> Session Value is: </b> ${sessionScope.user} <br>
    <b> Cookie name is: </b> ${cookie.name.value}
</body>
</html>
```

ELArithmetic.jsp

```jsp
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
        <title>ELArithmetic</title>
    </head>
    <body>
        <%-- arithmetic op --%>
        5*5+4: ${5*5+4} <br>
        10 mod 4: ${10 mod 4}<br>
        15 div 3: ${15 div 3}<br>
    </body>
</html>
```

ELLogicOperator.jsp

```jsp
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
        <title>ELLogicOperator</title>
    </head>
    <body>
        <%-- LogicalOperator --%>
        <h2>Logical Operator</h2>
        true and true: ${true and true}<br>
        true && false: ${true && false}<br>
        true or true: ${true or true}<br>
        true || false: ${true || false}<br>
        not true: ${not true}<br>
        !false: ${!false}
</body>
</html>
```

ELRelationalOperator.jsp

```jsp
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
        <title>ELRelationalOperator</title>
```

```
    </head>
    <body>
      <%-- RelationalOperator --%>
      <h2>Relational Operator</h2>

      10.0==10: ${10.0==10} <br>
      10.0 eq 10: ${10.0 eq 10} <br>

      ((20*10)!= 200): ${((20*10)!= 200)} <br>
      3 ne 3: ${3 ne 3} <br>

      2>1: ${2>1} <br>
      2 gt 1: ${2 gt 1} <br>

      3.2>=2: ${3.2>=2} <br>
      3.2 ge 2: ${3.2 ge 2} <br>

      2<3: ${2<3} <br>
      4 lt 6: ${4 lt 6} <br>

      2 <= 4: ${2 <= 4} <br>
      4 le 2: ${4 le 2}

    </body>
</html>
```

ELConditionalOperator.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
   <head>
      <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
      <title>ELConditionalOperator</title>
   </head>
   <body>
      <h2>Conditional Operator</h2>
      The result of 10>2 is: "${(10>1)?'greater':'lesser'}"
   </body>
</html>
```

EmptyOperator.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
   <head>
```

```html
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
    <title>EmptyOperator</title>
  </head>
  <body>
    <H1>Empty Operator Example</H1>
    The Value for the Empty operator is:: ${empty "txt"}
  </body>
</html>
```
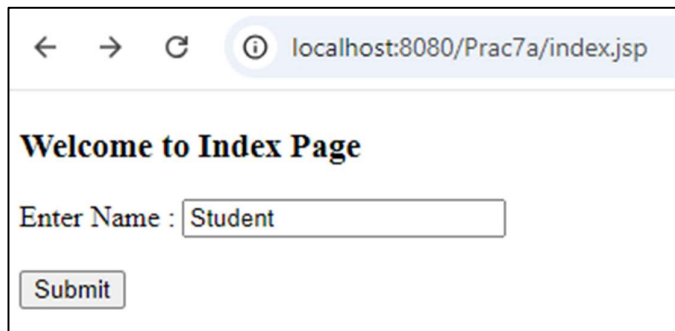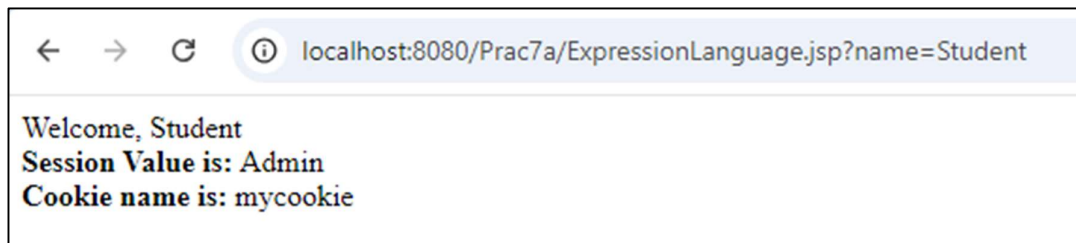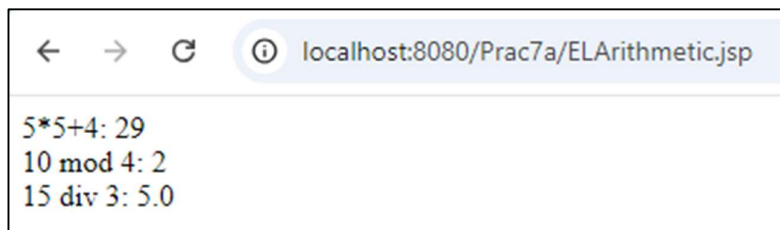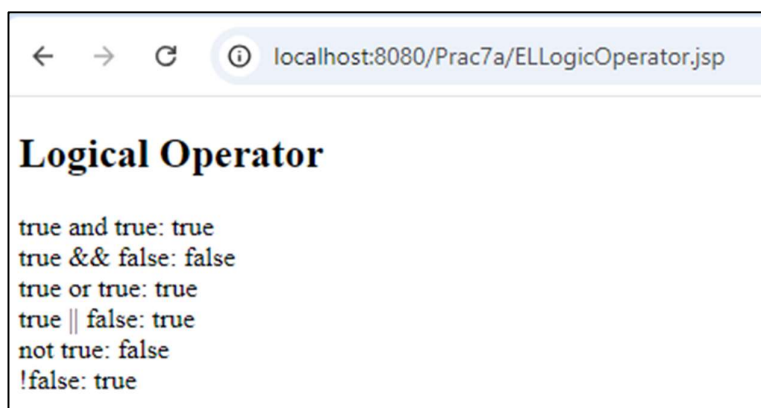
Output:

---

localhost:8080/Prac7a/index.jsp

Welcome to Index Page

Enter Name : Student

Submit

---

localhost:8080/Prac7a/ExpressionLanguage.jsp?name=Student

Welcome, Student
Session Value is: Admin
Cookie name is: mycookie

---

localhost:8080/Prac7a/ELArithmetic.jsp

5*5+4: 29
10 mod 4: 2
15 div 3: 5.0

---

localhost:8080/Prac7a/ELLogicOperator.jsp

Logical Operator

true and true: true
true && false: false
true or true: true
true || false: true
not true: false
!false: true

Relational Operator

10.0==10: true
10.0 eq 10: true
((20*10)!= 200): false
3 ne 3: false
2>1: true
2 gt 1: true
3.2>=2: true
3.2 ge 2: true
2<3: true
4 lt 6: true
2 <= 4: true
4 le 2: false

Conditional Operator

The result of 10>2 is: "greater"

Empty Operator Example

The Value for the Empty operator is:: false

Practical No. 7(b)
Q. Create a JSP application to demonstrate the use of JSTL.

index.html

```html
<html>
  <body>
    <a href="setDemo.jsp">SetDemo</a><br>
    <a href="MaxIf.html">MaxIF</a><br>
    <a href="forEachDemo.jsp">ForEachDemo</a><br>
    <a href="outDemo.jsp">OutDemo</a><br>
    <a href="URLDemo.jsp">URLDemo</a><br>
    <a href="Choose_when_otherwise.jsp">choose_when_otherwise</a><br>
  </body>
</html>
```

setDemo.jsp

```jsp
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<c:set
  var="pageTitle"
  scope="application"
  value="Barclays Premier League: Registration"
/>
${pageTitle}
```

MaxIf.html

```html
<form action ="IFDemo.jsp">
    x=<input type="text" name="x" /><br>
    y=<input type="text" name="y" /><br>
 <input type="submit" value="Check Max" />
 </form>
```

IFDemo.jsp

```jsp
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>

<c:set var="x" value="${param.x}" />
<c:set var="y" value="${param.y}" />

<c:if test="${x > y}">
  <font color="blue">
```

```
    <h2>The Ans is:</h2>
  </font>
  <c:out value="${x} is greater than ${y}" />
</c:if>
```

forEachDemo.jsp

```
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>

<c:forEach begin="1" end="10" var="i">
  The Square of <c:out value="${i}=${i * i}" /><br>
</c:forEach>
```

outDemo.jsp

```
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>

<c:set var="name" value="John" />
My name is: <c:out value="${name}" />
```

URLDemo.jsp

```
<%@taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<c:url value="/index.html"/>
```

Choose_when_otherwise.jsp

```
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>

<c:set var="income" value="${20000 * 4}" />
Your Income is: <c:out value="${income}" />

<c:choose>
  <c:when test="${income <= 1000}">
    Income is not good
  </c:when>
  <c:when test="${income > 10000}">
    Income is Very Good
  </c:when>
  <c:otherwise>
    Income is undetermined
  </c:otherwise>
</c:choose>
```

Output:

---

localhost:8080/Prac7b/index.html

SetDemo
MaxIF
ForEachDemo
OutDemo
URLDemo
choose_when_otherwise

---

localhost:8080/Prac7b/setDemo.jsp

Barclays Premier League: Registration

---

localhost:8080/Prac7b/MaxIf.html

x= 9
y= 5
Check Max

---

localhost:8080/Prac7b/IFDemo.jsp?x=9&y=5

The Ans is:

9 is greater than 5

---

localhost:8080/Prac7b/forEachDemo.jsp

The Square of 1=1
The Square of 2=4
The Square of 3=9
The Square of 4=16
The Square of 5=25
The Square of 6=36
The Square of 7=49
The Square of 8=64
The Square of 9=81
The Square of 10=100

localhost:8080/Prac7b/outDemo.jsp

My name is: Denish

localhost:8080/Prac7b/URLDemo.jsp

/Prac7b/index.html

localhost:8080/Prac7b/Choose_when_otherwise.jsp

Your Income is: 80000 Income is Very Good