

AIM: Develop Servlet Application of Basic Calculator(+,-,*,/,%) using ServletInputStream and ServletOutputStream.

DESCRIPTION:-

In java with using 2 operand's and 1 operator we can calculate the basic mathematically operation such as addition, subtraction, multiplication, division

Servlet is a Java class which extends the capabilities of server that provides the application accessed by means of request response model. It uses two interfaces i.e. HttpServletRequest & HttpServletResponse

HttpRequest: This is an interface which provides methods for extracting HTTP parameters from the query or request body depending on the type of request i.e. get or post

HttpResponse: This interface provides an OutputStream for retrieving information such as images or PrintWriter for retrieving text output.

Source Code:

Index.jsp(GUI)

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">

<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
    <title>Welcome</title>
  </head>
  <body>
    <h3>Please Enter Two Numbers :::</h3>
    <form method="GET" action="Cal">
      Number:<input type="text" id="t1" name="t1"/><br/>
      <select name="op">
        <option value="+">+</option>
        <option value="-">-</option>
        <option value="*">*</option>
        <option value="/">/</option>
        <option value="%">%</option>
      </select><br/>
      Number:<input type="text" id="t2" name="t2">
      <input type="submit" value="calculate"/><br/>
    </form>
  </body>
</html>
```

Calculator.java(Servlet File)

```

import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
public class Cal extends HttpServlet
{
public void doGet(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
response.setContentType("text/html;charset=UTF-8");
PrintWriter pw= response.getWriter();
int n1 = Integer.parseInt(request.getParameter("t1"));
int n2 = Integer.parseInt(request.getParameter("t2"));
String op=request.getParameter("op");
if(op.equals("+")){pw.println("Addition :::"+(n1+n2));}
else if(op.equals("-")){pw.println("Subtraction :::"+(n1-n2));}
else if(op.equals("*")){pw.println("Multiplication :::"+(n1*n2));}
else if(op.equals("/")){pw.println("Division :::"+(n1/n2));}
else{pw.println("Remainder :::"+(n1%n2));}
pw.close(); }
}

```

Output:



