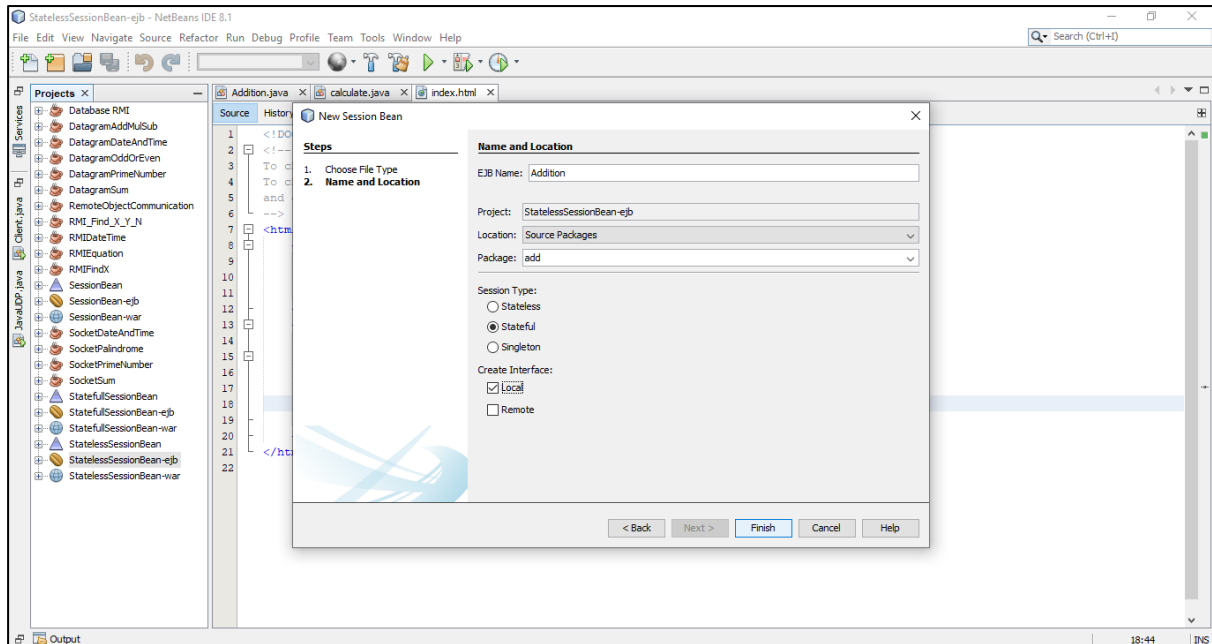


UNIVERSITY OF MUMBAI Practical Examination – November 2018 M.C.A Semester – V
LABORATORY L502 [Open Source System for ADC Lab]

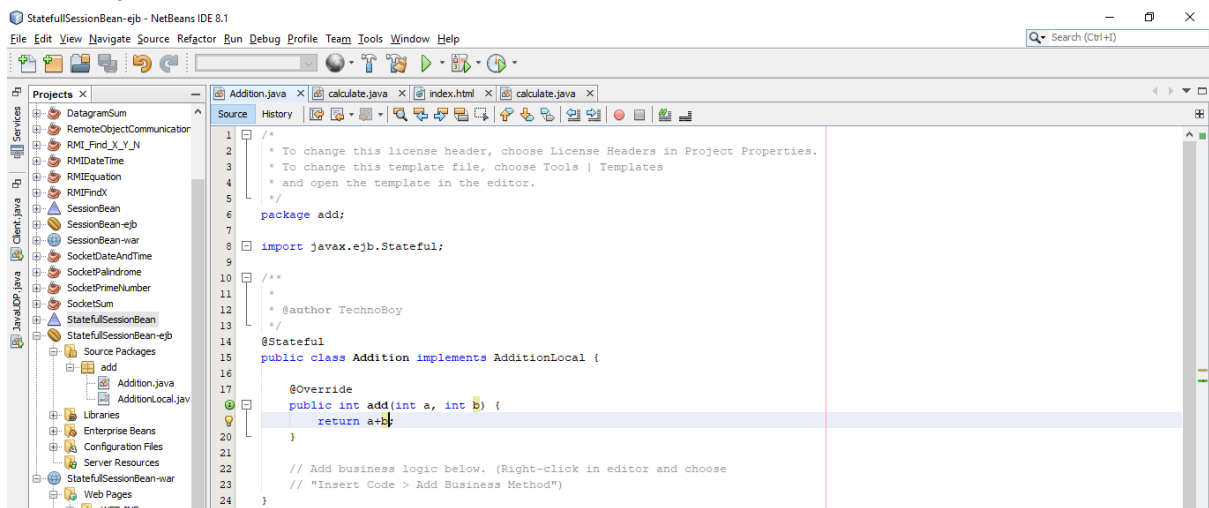
Stateful and Stateless

Use Statefull and Stateless Bean to add two numbers

Statefull

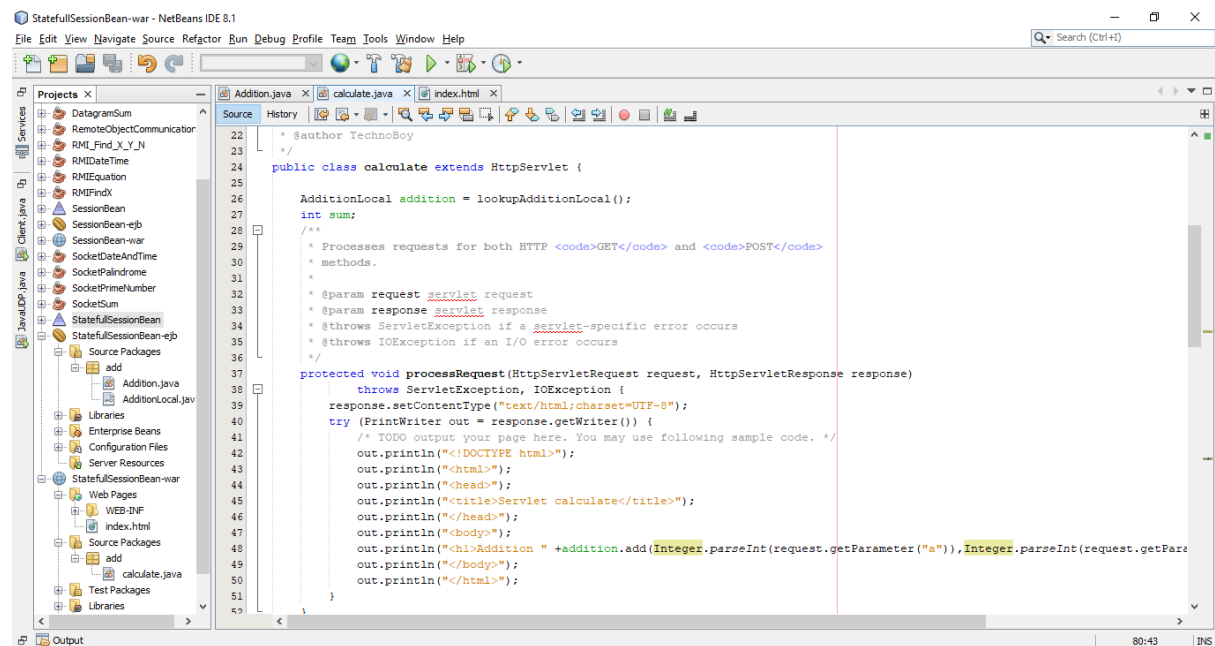


Addition.java



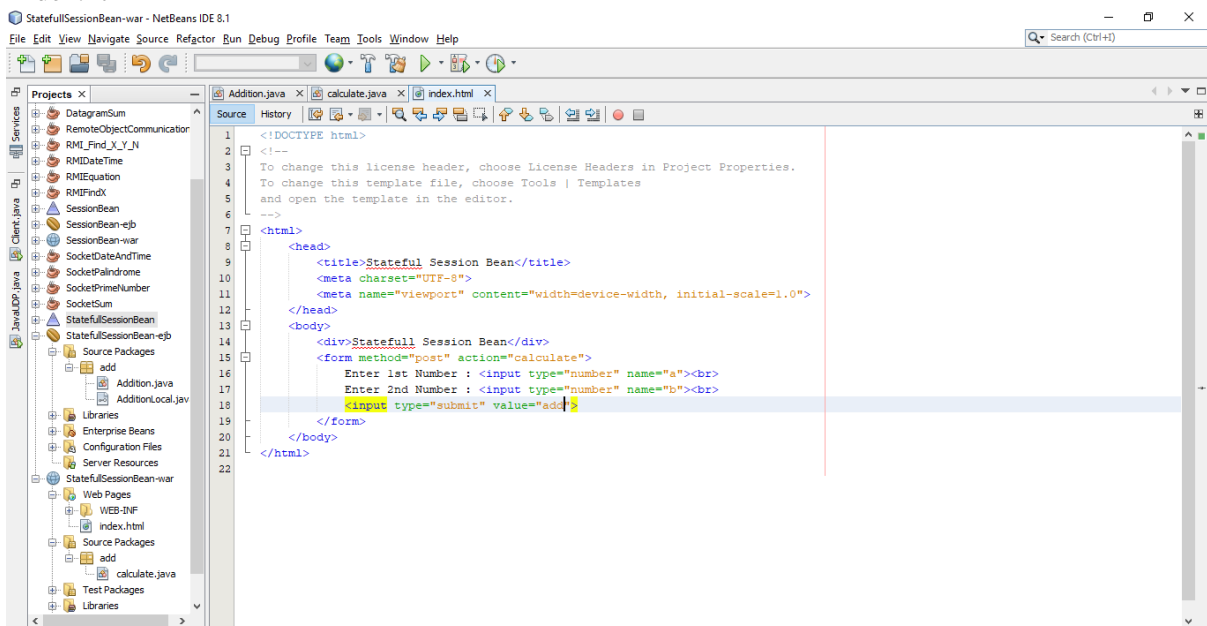
UNIVERSITY OF MUMBAI Practical Examination – November 2018 M.C.A Semester – V LABORATORY L502 [Open Source System for ADC Lab]

Calculate.java



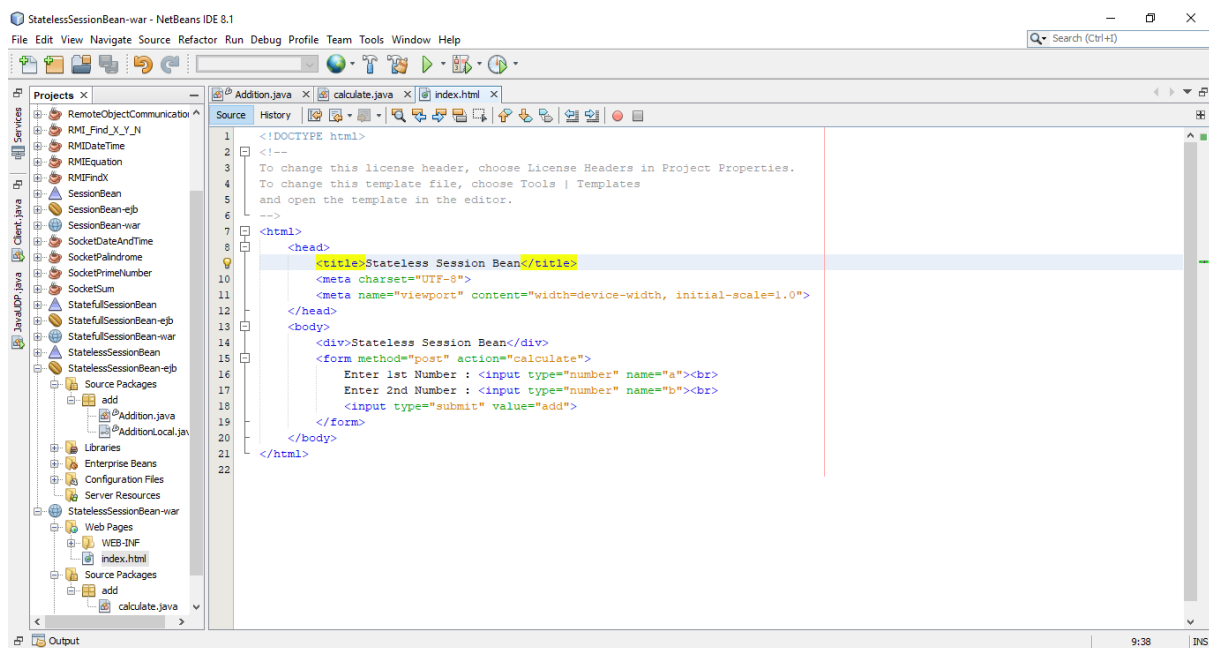
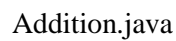
```
22  * @author TechnoBoy
23  */
24  public class calculate extends HttpServlet {
25
26      AdditionLocal addition = lookupAdditionLocal();
27      int sum;
28
29      /**
30       * Processes requests for both HTTP GET and POST
31       * methods.
32       *
33       * @param request HttpServletRequest request
34       * @param response HttpServletResponse response
35       * @throws ServletException if a servlet-specific error occurs
36       * @throws IOException if an I/O error occurs
37       */
38      protected void processRequest(HttpServletRequest request, HttpServletResponse response)
39          throws ServletException, IOException {
40          response.setContentType("text/html;charset=UTF-8");
41          try (PrintWriter out = response.getWriter()) {
42              /* TODO output your page here. You may use following sample code. */
43              out.println("<!DOCTYPE html>");
44              out.println("<html>");
45              out.println("<head>");
46              out.println("<title>Servlet calculate</title>");
47              out.println("</head>");
48              out.println("<body>");
49              out.println("<div>Addition " + addition.add(Integer.parseInt(request.getParameter("a")), Integer.parseInt(request.getParameter("b"))) + "</div>");
50              out.println("</body>");
51              out.println("</html>");
52          }
53      }
54  }
```

index.html



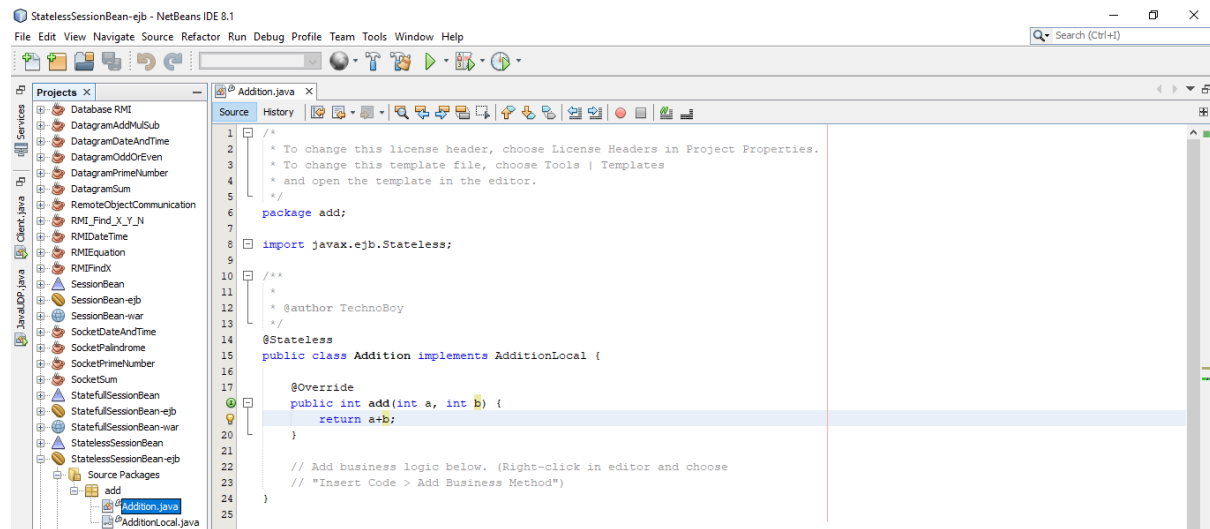
```
1  <!DOCTYPE html>
2  <!--
3  To change this license header, choose License Headers in Project Properties.
4  To change this template file, choose Tools | Templates
5  and open the template in the editor.
6  -->
7  <html>
8  <head>
9      <title>Stateful Session Bean</title>
10     <meta charset="UTF-8">
11     <meta name="viewport" content="width=device-width, initial-scale=1.0">
12 </head>
13 <body>
14     <div>Stateful Session Bean</div>
15     <form method="post" action="calculate">
16         Enter 1st Number : <input type="number" name="a"><br>
17         Enter 2nd Number : <input type="number" name="b"><br>
18         <input type="submit" value="add">
19     </form>
20 </body>
21 </html>
```

Stateless



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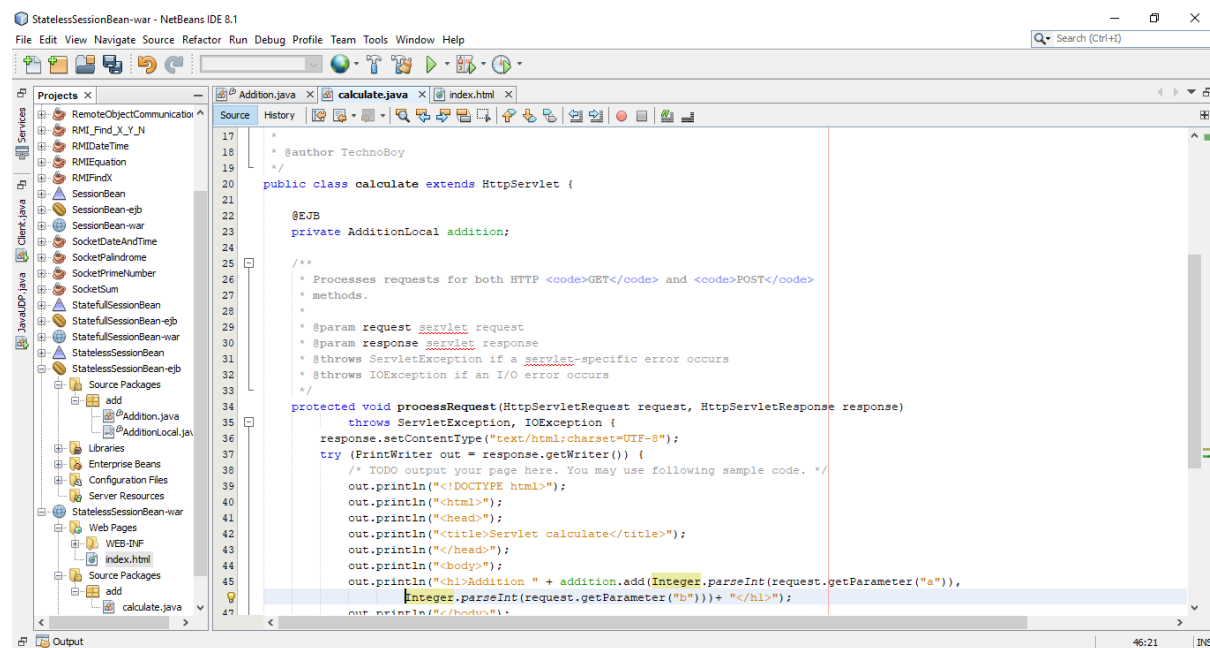
Index.html



The screenshot shows the NetBeans IDE interface. The 'Projects' window on the left displays a project named 'StatelessSessionBean-ejb' with a package named 'add'. The 'add' package contains two files: 'Addition.java' and 'AdditionLocal.java'. The 'Addition.java' file is selected and its source code is displayed in the main editor window. The code is as follows:

```
1  /*  
2   * To change this license header, choose License Headers in Project Properties.  
3   * To change this template file, choose Tools | Templates  
4   * and open the template in the editor.  
5   */  
6  
7  package add;  
8  
9  import javax.ejb.Stateless;  
10  
11  /**  
12   *  
13   * @author TechnoBoy  
14   */  
15  @Stateless  
16  public class Addition implements AdditionLocal {  
17  
18      @Override  
19      public int add(int a, int b) {  
20          return a+b;  
21      }  
22  
23      // Add business logic below. (Right-click in editor and choose  
24      // "Insert Code > Add Business Method")  
25  }
```

Calculate.java



The screenshot shows the NetBeans IDE interface with multiple tabs open: 'Addition.java', 'calculate.java', and 'index.html'. The 'calculate.java' file is selected and its source code is displayed in the main editor window. The code is as follows:

```
17  /*  
18   * @author TechnoBoy  
19   */  
20  public class calculate extends HttpServlet {  
21  
22      @EJB  
23      private AdditionLocal addition;  
24  
25      /**  
26       * Processes requests for both HTTP <code>GET</code> and <code>POST</code>  
27       * methods.  
28       *  
29       * @param request servlet request  
30       * @param response servlet response  
31       * @throws ServletException if a servlet-specific error occurs  
32       * @throws IOException if an I/O error occurs  
33       */  
34  protected void processRequest(HttpServletRequest request, HttpServletResponse response)  
35      throws ServletException, IOException {  
36      response.setContentType("text/html;charset=UTF-8");  
37      try (PrintWriter out = response.getWriter()) {  
38          /* TODO output your page here. You may use following sample code. */  
39          out.println("<!DOCTYPE html>");  
40          out.println("<html>");  
41          out.println("<head>");  
42          out.println("<title>Servlet calculate</title>");  
43          out.println("</head>");  
44          out.println("<body>");  
45          out.println("<h1>Addition " + addition.add(Integer.parseInt(request.getParameter("a")),  
46          Integer.parseInt(request.getParameter("b")))+ "</h1>");  
47          out.println("</body>");  
48      }
```