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|  | **Program using threads in java** |  |
| **PROGRAM:**  class count implements runnable  {  thread mythread ;  count()  {  mythread = new thread(this, "my runnable thread");  system.out.println("my thread created" + mythread); mythread.start();  }  public void run()  {  try  {  for (int i=0 ;i<10;i++)  {  system.out.println("printing the count " + i);  thread.sleep(1000);  }  }  catch(interruptedexception e)  {  system.out.println("my thread interrupted");  }  system.out.println("mythread run is over" );  }  }  class runnableexample  {  public static void main(string args[])  {  count cnt = new count();  try  {  while(cnt.mythread.isalive())  {  system.out.println("main thread will be alive till the child thread is live");  thread.sleep(1500);  }  } | | |

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| catch(interruptedexception e)  {  system.out.println("main thread interrupted");  }  system.out.println("main thread run is over" );  }  } | | |

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|  | **Socket Programming- chat application** |  |
| **PROGRAM:**  **Chatserver.java:**  import java.net.\*;  import java.io.\*;  public class chatserver  {  public static void main(String args[]) throws Exception  {  ServerSocket ss=new ServerSocket(3000);  Socket sk=ss.accept();  BufferedReader cin=new BufferedReader(new InputStreamReader(sk.getInputStream()));  PrintStream cout=new PrintStream(sk.getOutputStream());  BufferedReader stdin=new BufferedReader(new InputStreamReader(System.in));  String s;  while ( true )  {  s=cin.readLine();  if (s.equalsIgnoreCase("END"))  {  cout.println("BYE");  break;  }  System. out.print("Client : "+s+"\n");  System.out.print("Server : ");  s=stdin.readLine();  cout.println(s);  }  ss.close();  sk.close();  cin.close();  cout.close();  stdin.close();  }  } | | |

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| **Chatclient.java:**  import java.net.\*;  import java.io.\*;  public class chatclient  {  public static void main(String args[]) throws Exception  {  Socket sk=new Socket("127.0.0.1",3000);  BufferedReader sin=new BufferedReader(new InputStreamReader(sk.getInputStream()));  PrintStream sout=new PrintStream(sk.getOutputStream());  BufferedReader stdin=new BufferedReader(new InputStreamReader(System.in));  String s;  while ( true )  {  System.out.print("Client : ");  s=stdin.readLine();  sout.println(s);  s=sin.readLine();  System.out.print("Server : "+s+"\n");  if ( s.equalsIgnoreCase("BYE") )  break;  }  sk.close();  sin.close();  sout.close();  stdin.close();  }  } | | |

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|  | **Socket Programming- Echo application** |  |
| **PROGRAM:**  import java.io.\*;  import java.net.\*;  public class EchoServer  {  public EchoServer(int portnum)  {  try  {  Server=new ServerSocket(portnum)  }  catch (Exception err)  {  System.out.println(err);  }  }  public void server()  {  try  {  while (true)  {  Socket client = server.accept();  BufferedReader r = new BufferedReader(new InputStreamReader(client.getInputStream()));  PrintWriter w = new PrintWriter(client.getOutputStream(), true);  w.println("Welcome to the Java EchoServer. Type 'bye' to close.");  String line;  do  {  line = r.readLine();  if ( line != null )  w.println("Got: "+ line);  }while ( !line.trim().equals("bye") );  client.close();  }  } | | |  |

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| catch (Exception err)  {  System.err.println(err);  }  }  public static void main(String[] args)  {  EchoServer s = new EchoServer(9999);  s.serve();  }  private ServerSocket server;  }  EchoClient..java:  import java.io.\*;  import java.net.\*;  public class EchoClient  {  public static void main(String[] args)  {  try  {  Socket s = new Socket("127.0.0.1", 9999);  BufferedReader r = new BufferedReader(new  InputStreamReader(s.getInputStream()));  PrintWriter w = new PrintWriter(s.getOutputStream(), true);  BufferedReader con = new BufferedReader(new InputStreamReader(System.in));  String line;  do  {  line = r.readLine();  if ( line != null )  System.out.println(line);  line = con.readLine(); w.println(line);  }  while ( !line.trim().equals("bye") );  }  catch (Exception err)  {  System.err.println(err);  }  }  } | | |

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|  | Multicasting application using MulticastSocket |  |
| PROGRAM:  import java.io.\*;  import java.net.\*;  public class SimpleMulticastSource  {  public static void main(String[] args)  {  try  {  DatagramSocket s = new DatagramSocket();  // Create socket byte[] line = new byte[100];  System.out.print("Enter text to send: ");  while(!line.equals("close"))  {  int len = System.in.read(line);  InetAddress dest = InetAddress.getByName("225.0.0.1");  DatagramPacket pkt = new DatagramPacket(line, len, dest, 6000);  s.send(pkt);  }  s.close();  }  catch (Exception err)  {  System.err.println(err);  }  }  }  import java.io.\*;  import java.net.\*;  public class SimpleMulticastDestination  {  public static void main(String[] args)  {  try  {  MulticastSocket ms = new MulticastSocket(6000);  // Create socket ms.joinGroup(InetAddress.getByName("225.0.0.1"));  String msg;  do  {  byte[] line = new byte[100];  DatagramPacket pkt = new DatagramPacket(line, line.length); ms.receive(pkt);  msg = new String(pkt.getData()); | | |

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| System.out.println("From "+pkt.getAddress()+":"+msg.trim());  }  while ( !msg.trim().equals("close") );  ms.close();  // Close connection  }  catch (Exception err)  {  System.err.println(err);  }  }  } | | |

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|  | CREATION OF XML DOCUMENT TO DISPLAY CD CATALOG USING CSS TAGS |  |
| PROGRAM:  <?xml version="1.0" encoding="UTF-8"?>  <?xml-stylesheet type="text/css" href="cat.css"?>  <CATALOG>  <CD>  <TITLE>Empire Burlesque</TITLE>  <ARTIST>Bob Dylan</ARTIST>  <COUNTRY>USA</COUNTRY>  <COMPANY>Columbia</COMPANY>  <PRICE>10.90</PRICE>  <YEAR>1985</YEAR> </CD>  <CD>  <TITLE>For the good times</TITLE>  <ARTIST>Kenny Rogers</ARTIST>  <COUNTRY>UK</COUNTRY>  <COMPANY>Mucik Master</COMPANY>  <PRICE>8.70</PRICE>  <YEAR>1995</YEAR> </CD>  <CD>  <TITLE>Big Willie style</TITLE>  <ARTIST>Will Smith</ARTIST>  <COUNTRY>USA</COUNTRY>  <COMPANY>Columbia</COMPANY>  <PRICE>9.90</PRICE>  <YEAR>1997</YEAR> </CD>  <CD> | | |

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|  |  |  |
| <TITLE>Unchain my heart</TITLE>  <ARTIST>Joe Cocker</ARTIST>  <COUNTRY>USA</COUNTRY>  <COMPANY>EMI</COMPANY>  <PRICE>8.20</PRICE>  <YEAR>1987</YEAR> </CD>  </CATALOG> cat.css CATALOG { background-color: #ffffff; width: 100%;}  CD { display: block; margin-bottom: 30pt; margin-left: 0;} TITLE { display: block; color: #ff0000; font-size: 20pt;} ARTIST { display: block; color: #0000ff; font-size: 20pt;}  COUNTRY, PRICE, YEAR, COMPANY { display: block; color: #000000; margin-left: 20pt;  } | | |

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|  | Program using XML-XSLT/XSL |  |
| PROGRAM:  <?xml version="1.0" ?>  <?xml-stylesheet type="text/xsl" href="books.xsl"?>  <books>  <book>  <title>HTML Reference</title>  <author>Thomas Powell</author>  <publisher>Tata McGraw Hill</publisher>  <price>Rs.1090</price>  </book>  <book>  <title>JavaScript</title>  <author>Paul Hatcher</author>  <publisher>Tata McGraw Hill</publisher>  <price>Rs.1090</price>  </book>  <book>  <title>ASP</title>  <author>Bonnie Tyler</author>  <publisher>Tata McGraw Hill</publisher>  <price>Rs.990</price>  </book>  <book>  <title>XSLT</title>  <author>Doug Tidwell</author>  <publisher>O' Reilly</publisher>  <price>Rs.545</price>  </book><book>  <title>XML Bible</title>  <author>Elliot R. Harold</author>  <publisher>Wiley Publications</publisher>  <price>Rs.725</price>  </book>  </books> | | |

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| <?xml version="1.0" ?>  <xsl:stylesheet version="1.0" xmlns:xsl="<http://www.w3.org/1999/XSL/Transform>">  <xsl:template match="/">  <html>  <body>  <h2>Book Details</h2>  <table border="2" width="100%" height="50%">  <tr bgcolor="#9acd32">  <th>Title</th>  <th>Author</th>  <th>Publisher</th>  <th>Price</th>  </tr>  <xsl:for-each select="books/book">  <tr>  <td><xsl:value-of select="title" /></td>  <td><xsl:value-of select="author" /></td>  <td><xsl:value-of select="publisher" /></td>  <td><xsl:value-of select="price" /></td>  </tr>  </xsl:for-each>  </table>  </body>  </html>  </xsl:template>  </xsl:stylesheet> | | |

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|  | Invoking Servlet from HTML |  |
| **PROGRAM:**  <html>  <head><title>HTML Forms and Servlet</title></head>  <body style="background-color: darkgray ">  <h1>Enter your Details</h1>  <form style="background-color: cadetblue " action = "http://localhost:8080/HtmlServlet/MyServlet" method="get">  <table>  <tr>  <td>Name  <td><input type="text" name="name"><br><br>  </tr>  <tr>  <td>Reg No  <td><input type="text" name="reg"><br><br>  </tr>  <tr>  <td>Sub1 Mark  <td><input type="text" name="sub1"><br><br>  </tr>  <tr>  <td>Sub2 Mark  <td><input type="text" name="sub2"><br><br>  </tr>  <tr>  <td>Sub3 Mark  <td><input type="text" name="sub3"><br><br>  </tr>  <tr>  <td>Sub4 Mark  <td><input type="text" name="sub4"><br><br>  </tr>  <tr>  <td>Sub5 Mark  <td><input type="text" name="sub5"><br><br>  </tr>  <tr>  <td>Sub6 Mark  <td><input type="text" name="sub6"><br><br>  </tr>  </table>  <input type="submit">  </form>  </body>  </html> | | |

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| import java.io.\*;  import java.net.\*;  import javax.servlet.\*;  import javax.servlet.http.\*;  public class MyServlet extends HttpServlet {  public void init(ServletConfig config) throws ServletException { super.init(config);  }  public void destroy() {  }  public String display(int mark)  {  if(mark>90 && mark<=100)  {  return "S";  }  else if(mark>80 && mark<=90)  {  return("A");  }  else if(mark>70 && mark<=80)  {  return("B");  }  else if(mark>60 && mark<=70)  {  return("C");  }  else if(mark>55 && mark<=60)  {  return("D");  }  else if(mark>=50 && mark<55)  {  return("E");  } | | |

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| Else  {  return("Re Appear");  }  }  protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {  response.setContentType("text/html");  PrintWriter out = response.getWriter();  int total=0;  int per;  try {  String name, reg;  int mark,s1,s2,s3,s4,s5,s6;  name = request.getParameter("name");  reg = request.getParameter("reg");  s1 = Integer.parseInt(request.getParameter("sub1"));  s2 = Integer.parseInt(request.getParameter("sub2"));  s3 = Integer.parseInt(request.getParameter("sub3"));  s4 = Integer.parseInt(request.getParameter("sub4"));  s5 = Integer.parseInt(request.getParameter("sub5"));  s6 = Integer.parseInt(request.getParameter("sub6"));  total=s1+s2+s3+s4+s5+s6;  per=total/6;  response.setContentType("text/html");  out.println("<html>");  out.println("<head>");  out.println("<title>Mark Report Servlet</title>");  out.println("</head>");  out.println("<body>");  out.println("<center><p><h2><b>Name :" + name + "</p>");  out.println("<p><b>Reg No :" + reg + "</p>");  out.println("<p><b>Your Mark Details</p></center>");  out.println("<center><table border=2 cellpadding=5 cellspacing=5>"); out.println("<tr><th>Subjects</th><th>Mark</th><th>Grade</th></tr>"); out.println("<tr><th>Sub1</th><td>"+s1 + "</td>/<td>" + display(s1) + "</td></tr>"); out.println("<tr><th>Sub2</th><td>"+s2 + "</td><td>" + display(s2) + "</td></tr>"); out.println("<tr><th>Sub3</th><td>"+s3 + "</td><td>" + display(s3) + "</td></tr>"); out.println("<tr><th>Sub4</th><td>"+s4 + "</td><td>" + display(s4) + "</td></tr>"); out.println("<tr><th>Sub5</th><td>"+s5 + "</td><td>" + display(s5) + "</td></tr>"); | | |

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| out.println("<tr><th>Sub6</th><td>"+s6 + "</td><td>" + display(s6) +"</td></tr></table>");  out.println("<B>ToTal:<input type=text value="+total+">");  out.println("<B>Percentage:<input type=text value="+per+">");  out.println("<B>Your Overall Grade is :<input type=text value="+display(per)+">");  out.println("</body>");  out.println("</html>");  }  finally  {  out.close();  }  }  }  Web.xml  <?xml version="1.0" encoding="UTF-8"?>  <servlet>  <servlet-name>MyServlet</servlet-name>  <servlet-class>MyServlet</servlet-class>  </servlet>  <servlet-mapping>  <servlet-name>MyServlet</servlet-name>  <url-pattern>/MyServlet</url-pattern>  </servlet-mapping>  </web-app> | | |

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