Exercise-7 (Hello Ajax)

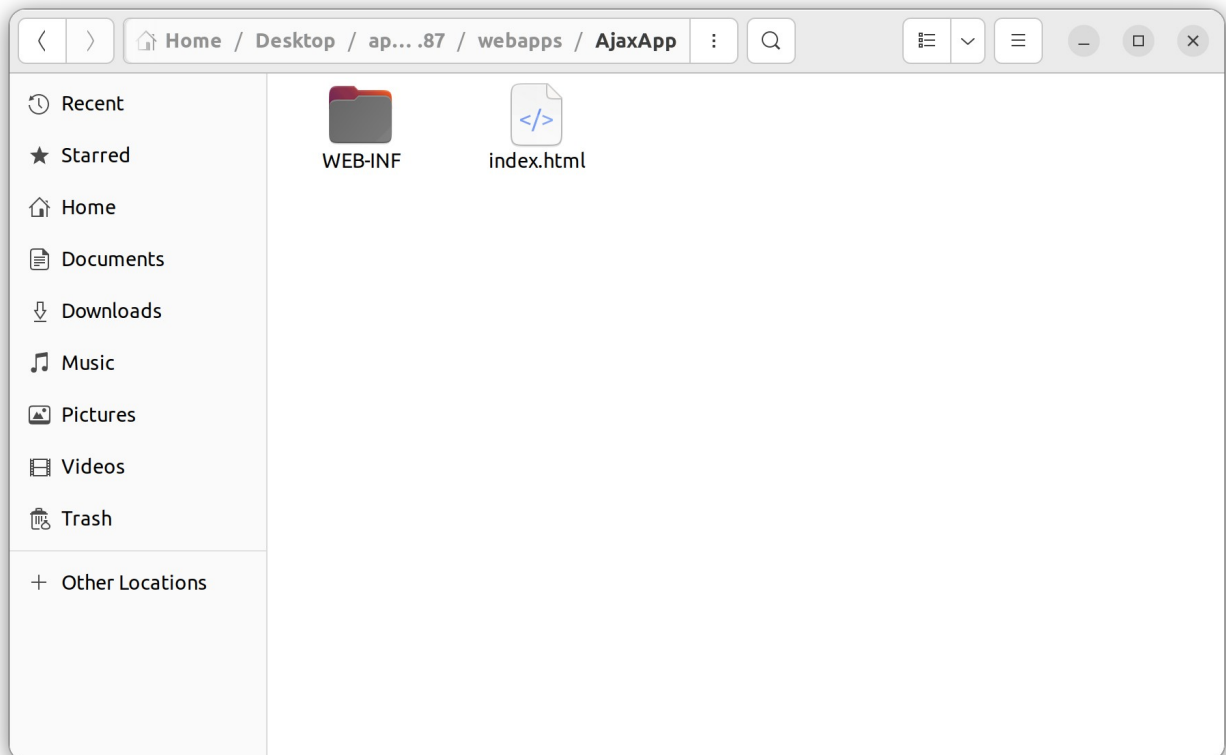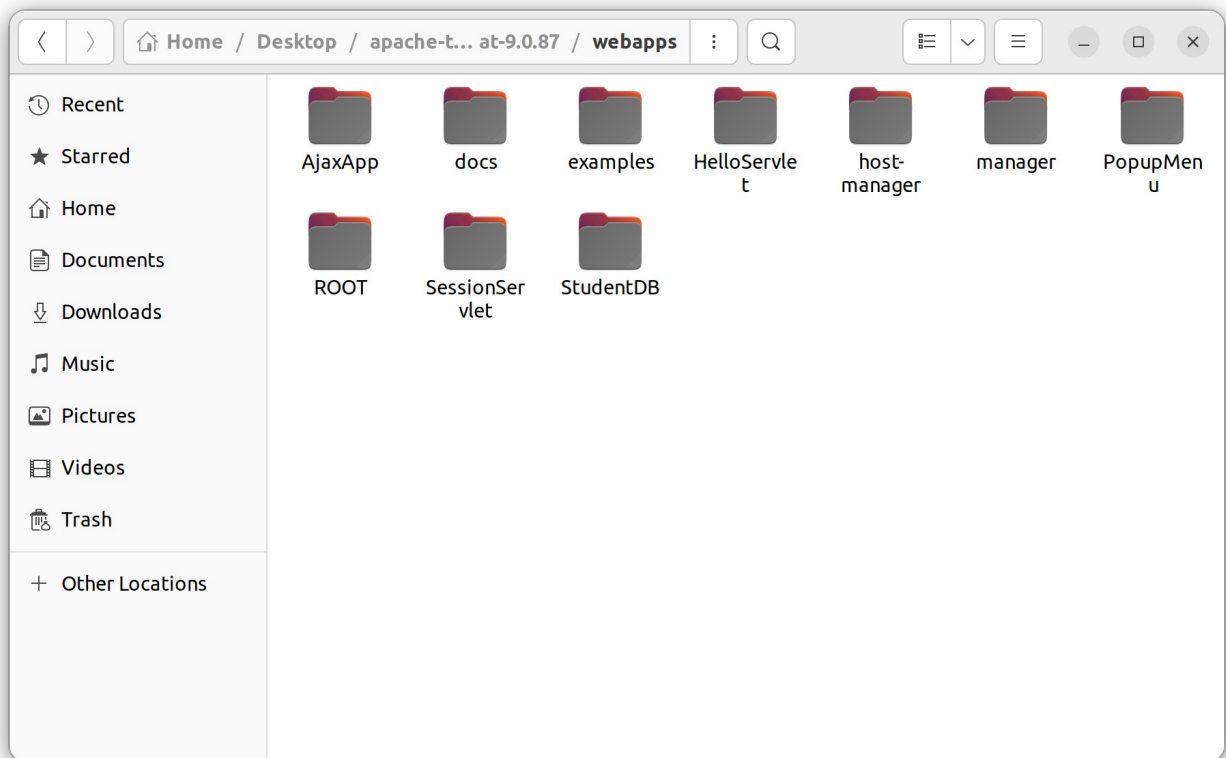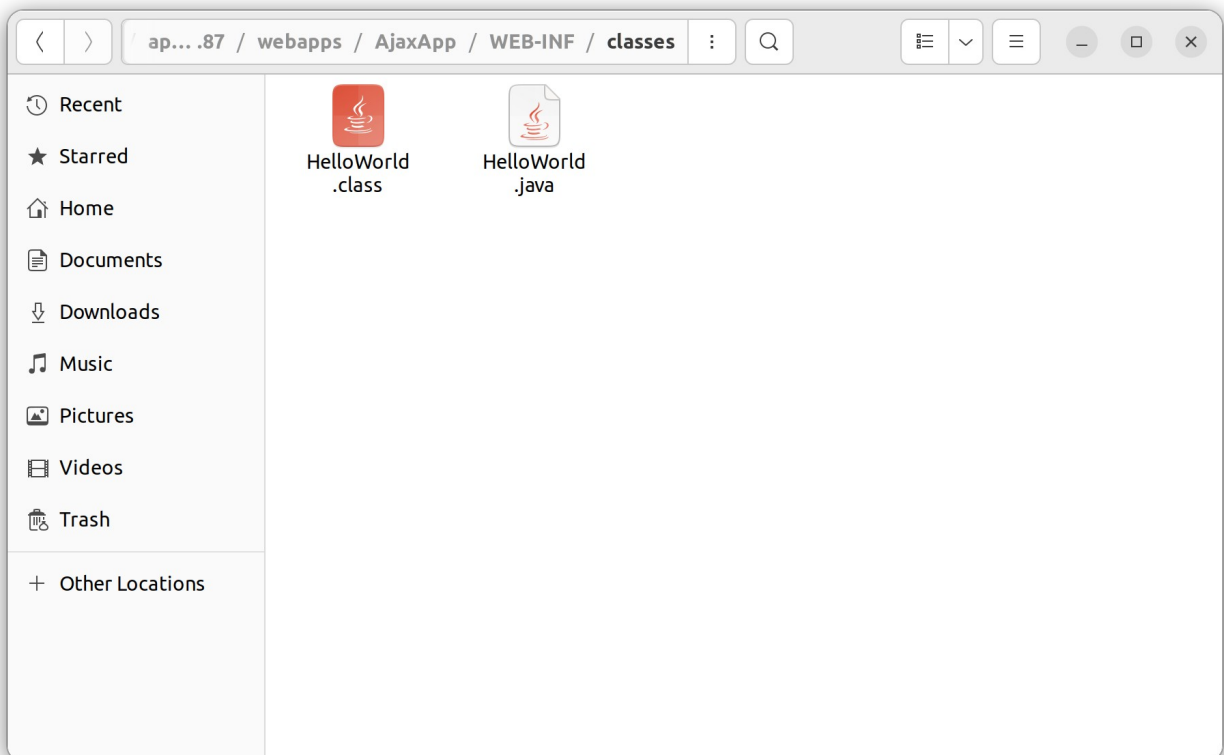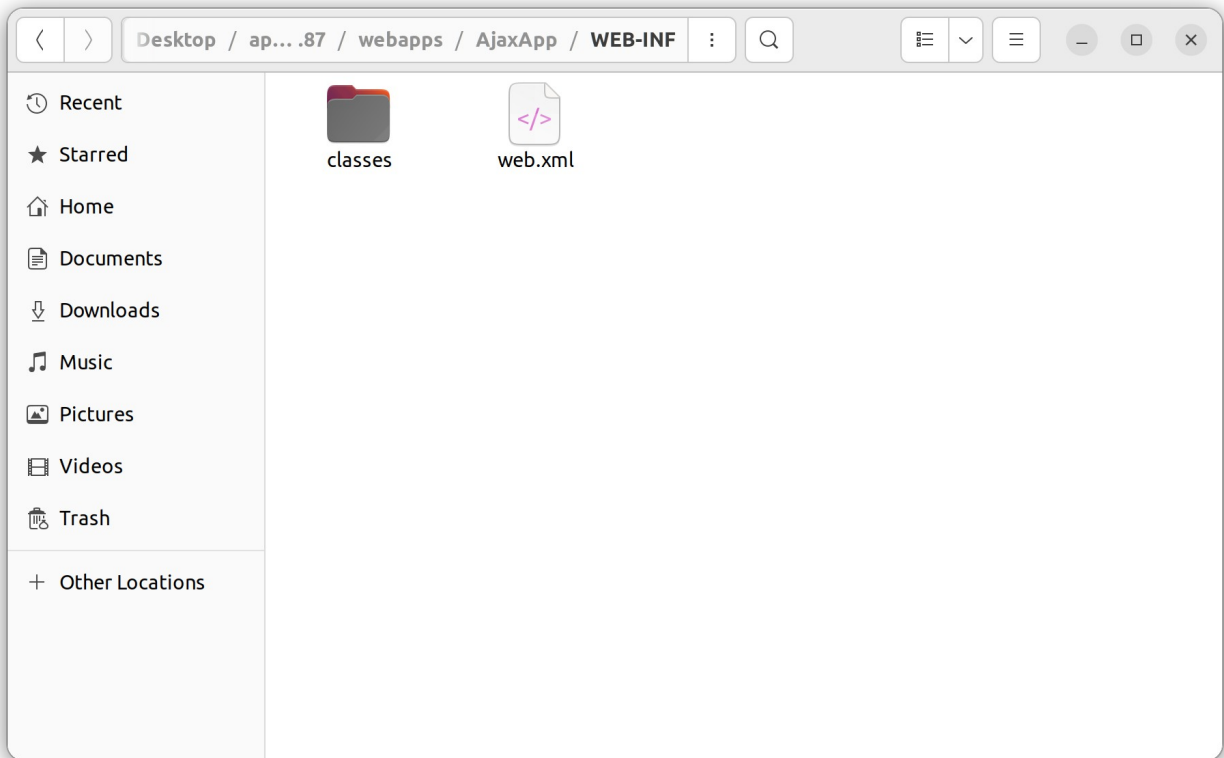Develop a simple dynamic web application ("Hello Ajax") using AJAX with Servlets. Use the given sample code and modify the event to Onclick to display "Hello Ajax" by overwriting the h1 tag text:

WebApp Structure:

ApacheTomcat→webapps

Recent
Starred
Home
Documents
Downloads
Music
Pictures
Videos
Trash

Other Locations

AjaxApp   docs   examples   HelloServle   host-   manager   PopupMen
                                        t   manager   u

ROOT   SessionSer   StudentDB
        vlet

Recent
Starred
Home
Documents
Downloads
Music
Pictures
Videos
Trash

Other Locations

WEB-INF   index.html

classes

web.xml

HelloWorld
.class
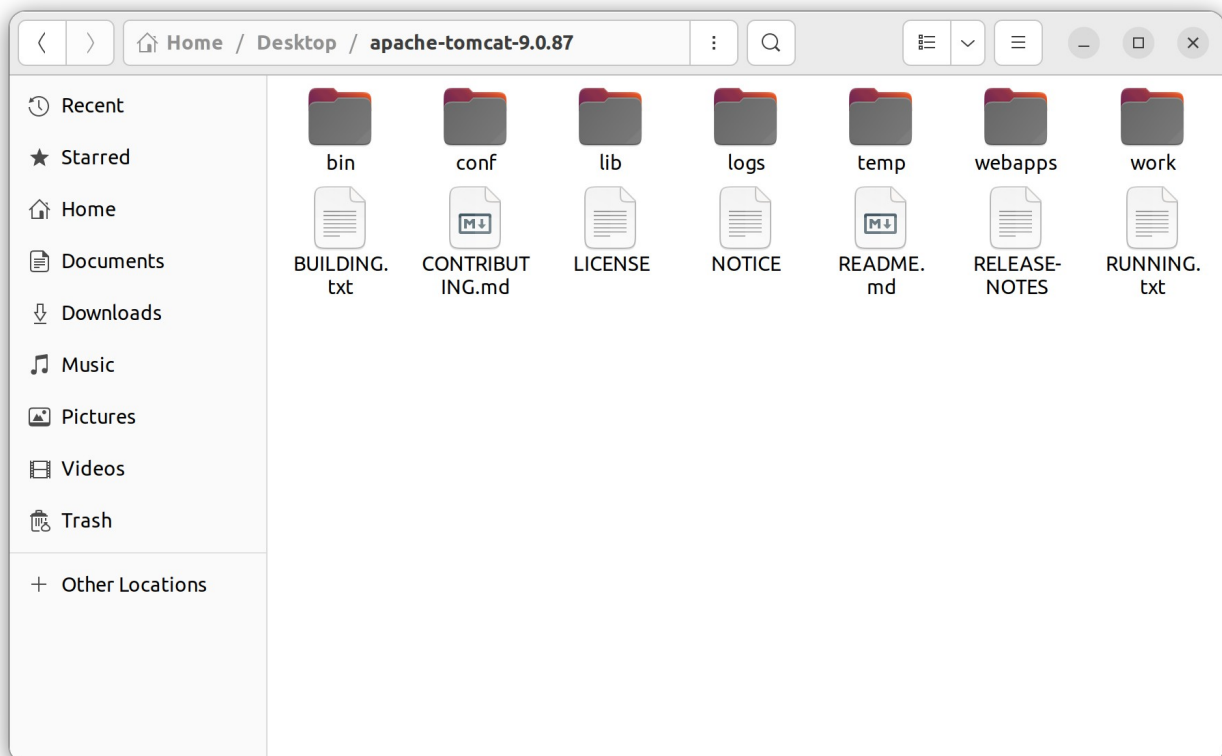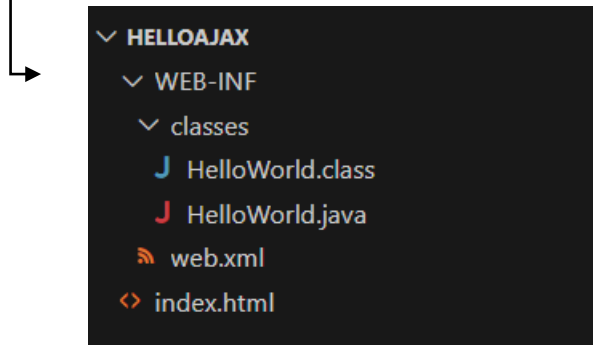
HelloWorld
.java

Program code:

HelloWorld.java

```java
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;

public class HelloWorld extends HttpServlet {

    public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws IOException, ServletException {
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();
        String n = request.getParameter("name");
        out.println("<h4>" + n + " </h4>");
        out.close();
    }
}
```

web.xml

```xml
<web-app>
    <servlet>
        <servlet-name>HelloWorld</servlet-name>
        <servlet-class>HelloWorld</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>HelloWorld</servlet-name>
        <url-pattern>/hello</url-pattern>
    </servlet-mapping>
    <welcome-file-list>
        <welcome-file>index.html</welcome-file>
    </welcome-file-list>
</web-app>
```

index.html

```html
<html>
    <head>
        <title>My First Web Application</title>
        <script>

            function loadData() {
                                var xhttp = new XMLHttpRequest();
                                var n = document.getElementById("name").value;
                                // window.alert(n);
                                xhttp.onreadystatechange = function() {
                                        if (this.readyState == 4 && this.status == 200)

            document.getElementById("content").innerHTML=this.responseText;
```
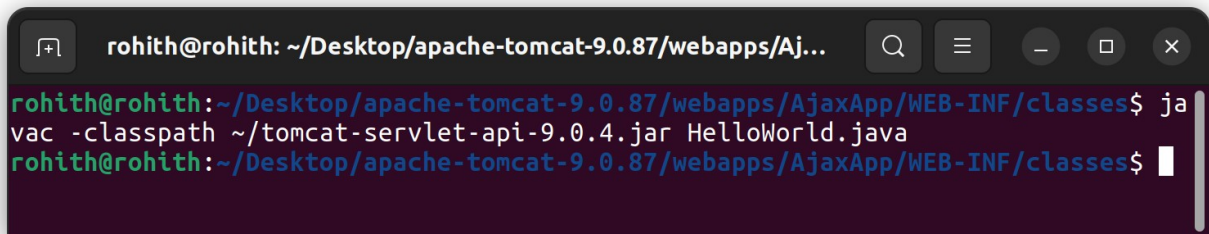
```
                            };
                            xhttp.open("GET","hello?name="+n,true);
                            xhttp.send();
                    }
        </script>
    </head>
    <body>
        <h1 id="content">Iam Default Content</h1>
        <input type="text" id="name" oninput="loadData()">

    </body>
</html>
```

Output:

Browser 2 — My First Web Application

localhost:8080/AjaxApp/

Iam Default Content

Rohith

Rohith

Rohith

Rohith

Inspector   Console   Debugger   Network   Style Editor   Performance   Memory   Storage   Accessibility   Application

Filter URLs   All HTML CSS JS XHR Fonts Images Media WS Other   Disable Cache   No Throttling

Status	Method	Domain	File	Initiator	Type	Transferred	Size		
200	GET	localhost:8080	hello?name=R	/AjaxApp/:15 (xhr)	html	178 B	12 B	2 ms	
200	GET	localhost:8080	hello?name=Ro	/AjaxApp/:15 (xhr)	html	179 B	13 B	2 ms	
200	GET	localhost:8080	hello?name=Roh	/AjaxApp/:15 (xhr)	html	180 B	14 B	2 ms	
200	GET	localhost:8080	hello?name=Rohi	/AjaxApp/:15 (xhr)	html	181 B	15 B	1 ms	
200	GET	localhost:8080	hello?name=Rohit	/AjaxApp/:15 (xhr)	html	182 B	16 B	1 ms	
200	GET	localhost:8080	hello?name=Rohith	/AjaxApp/:15 (xhr)	html	183 B	17 B	1 ms	

6 requests   87 B / 1.08 kB transferred   Finish: 2.80 s

```
Using CATALINA_HOME:    /home/rohith/Desktop/apache-tomcat-9.0.87
Using CATALINA_TMPDIR: /home/rohith/Desktop/apache-tomcat-9.0.87/temp
Using JRE_HOME:         /usr
Using CLASSPATH:        /home/rohith/Desktop/apache-tomcat-9.0.87/bin/bootstrap.
jar:/home/rohith/Desktop/apache-tomcat-9.0.87/bin/tomcat-juli.jar
Using CATALINA_OPTS:
Tomcat started.
rohith@rohith:~/Desktop/apache-tomcat-9.0.87/webapps/AjaxApp/WEB-INF/classes$ $
{CATALINA_HOME}/bin/shutdown.sh
Using CATALINA_BASE:    /home/rohith/Desktop/apache-tomcat-9.0.87
Using CATALINA_HOME:    /home/rohith/Desktop/apache-tomcat-9.0.87
Using CATALINA_TMPDIR: /home/rohith/Desktop/apache-tomcat-9.0.87/temp
Using JRE_HOME:         /usr
Using CLASSPATH:        /home/rohith/Desktop/apache-tomcat-9.0.87/bin/bootstrap.
jar:/home/rohith/Desktop/apache-tomcat-9.0.87/bin/tomcat-juli.jar
Using CATALINA_OPTS:
NOTE: Picked up JDK_JAVA_OPTIONS:  --add-opens=java.base/java.lang=ALL-UNNAMED
--add-opens=java.base/java.io=ALL-UNNAMED --add-opens=java.base/java.util=ALL-U
NNAMED --add-opens=java.base/java.util.concurrent=ALL-UNNAMED --add-opens=java.
rmi/sun.rmi.transport=ALL-UNNAMED
rohith@rohith:~/Desktop/apache-tomcat-9.0.87/webapps/AjaxApp/WEB-INF/classes$
```

Best Practices to be followed:

1. Design before coding
2. Incremental coding
3. Usage of proper naming convention
4. Usage of Comments to the code
5. Indentation of code