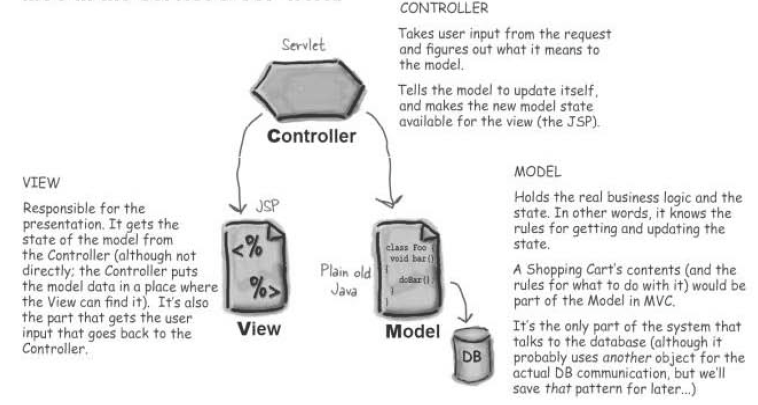
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **National University of Computer and Emerging Sciences, Lahore Campus** | | | | |
| C:\Users\saif\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Word\final design.jpg | **Course:** | **Web Programming** | **Course Code:** | **CS-406** |
| **Program:** | **BS(Computer Science)** | **Semester:** | **Fall 2017** |
| **Duration:** | **60 Minutes** | **Total Marks:** | **40** |
| **Paper Date:** | **20-Sep-17** | **Weight** | **15%** |
| **Section:** | **ALL** | **Page(s):** | **3** |
| **Exam:** | **Mid 1** | **Roll No:** |  |
| **Instruction/Notes:** | **Note: Please use the answer sheet to answer the questions.** | | | |

Question1- What is MVC design pattern? briefly describe all three parts of the MVC pattern and why they are used.

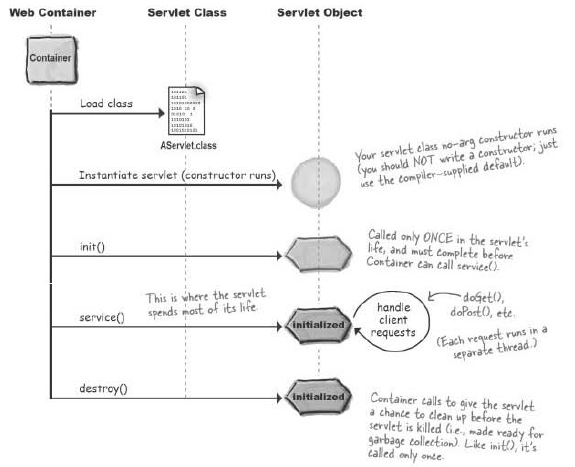
Marks 10

ANS:



Question 2- Describe a servlet's life cycle. List out all the methods involved in the life cycle and the purpose of each method.

Marks 10



1. Initialized
2. Service method is running
3. Destroyed

Question 3- What is the purpose of having a Listener in a web application. Give two examples of Listeners.

Marks 5

For every life cycle event in the Container there is a Listener, which can be used to do some action before the servlet of JSP is called.

Examples for Listeners:

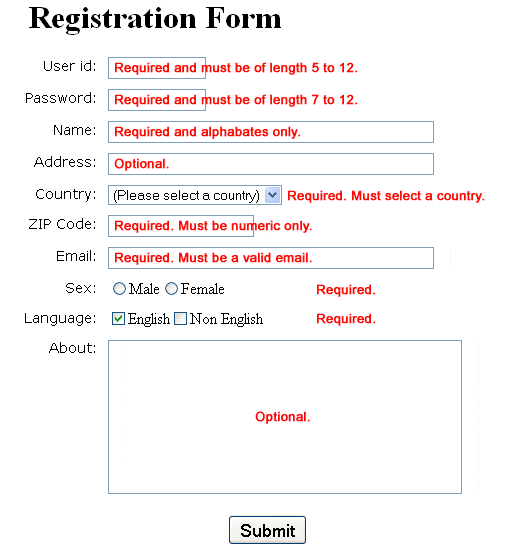
HttpSessionLIstener

ServletRequestListener

HttpSessionAttributeListener.

Question 4- As per the figure and HTML code given below write java script validation function to validate all the requirements given in red.

Marks 15



1. **<html** lang="en"**><head>**
2. **<meta** charset="utf-8"**>**
3. **<title>**JavaScript Form Validation using a sample registration form**</title>**
4. **<meta** name="keywords" content="example, JavaScript Form Validation, Sample registration form" **/>**
5. **<meta** name="description" content="This document is an example of JavaScript Form Validation using a sample registration form. " **/>**
6. **<link** rel='stylesheet' href='js-form-validation.css' type='text/css' **/>**
7. **<script** src="sample-registration-form-validation.js"**></script>**
8. **</head>**
9. **<body** onload="document.registration.userid.focus();"**>**
10. **<h1>**Registration Form**</h1>**
11. **<p>**Use tab keys to move from one input field to the next.**</p>**
12. **<form** name='registration' onSubmit="return formValidation();"**>**
13. **<ul>**
14. **<li><label** for="userid"**>**User id:**</label></li>**
15. **<li><input** type="text" name="userid" size="12" **/></li>**
16. **<li><label** for="passid"**>**Password:**</label></li>**
17. **<li><input** type="password" name="passid" size="12" **/></li>**
18. **<li><label** for="username"**>**Name:**</label></li>**
19. **<li><input** type="text" name="username" size="50" **/></li>**
20. **<li><label** for="address"**>**Address:**</label></li>**
21. **<li><input** type="text" name="address" size="50" **/></li>**
22. **<li><label** for="country"**>**Country:**</label></li>**
23. **<li><select** name="country"**>**
24. **<option** selected="" value="Default"**>**(Please select a country)**</option>**
25. **<option** value="AF"**>**Australia**</option>**
26. **<option** value="AL"**>**Canada**</option>**
27. **<option** value="PK"**>**Pakistan**</option>**
28. **<option** value="AS"**>**Russia**</option>**
29. **<option** value="AD"**>**USA**</option>**
30. **</select></li>**
31. **<li><label** for="zip"**>**ZIP Code:**</label></li>**
32. **<li><input** type="text" name="zip" **/></li>**
33. **<li><label** for="email"**>**Email:**</label></li>**
34. **<li><input** type="text" name="email" size="50" **/></li>**
35. **<li><label** id="gender"**>**Sex:**</label></li>**
36. **<li><input** type="radio" name="msex" value="Male" **/><span>**Male**</span></li>**
37. **<li><input** type="radio" name="fsex" value="Female" **/><span>**Female**</span></li>**
38. **<li><label>**Language:**</label></li>**
39. **<li><input** type="checkbox" name="en" value="en" checked **/><span>**English**</span></li>**
40. **<li><input** type="checkbox" name="nonen" value="noen" **/><span>**Non English**</span></li>**
41. **<li><label** for="desc"**>**About:**</label></li>**
42. **<li><textarea** name="desc" id="desc"**></textarea></li>**
43. **<li><input** type="submit" name="submit" value="Submit" **/></li>**
44. **</ul>**
45. **</form>**
46. **</body>**
47. **</html>**

ANS:

1. **function** passid\_validation(passid,mx,my)
2. {
3. **var** passid\_len = passid.value.length;
4. **if** (passid\_len == 0 ||passid\_len >= my || passid\_len < mx)
5. {
6. alert("Password should not be empty / length be between "+mx+" to "+my);
7. passid.focus();
8. **return** **false**;
9. }
10. **return** **true**;
11. }
12. **function** allLetter(uname)
13. {
14. **var** letters = /^[A-Za-z]+$/;
15. **if**(uname.value.match(letters))
16. {
17. **return** **true**;
18. }
19. **else**
20. {
21. alert('Username must have alphabet characters only');
22. uname.focus();
23. **return** **false**;
24. }
25. }
26. **function** alphanumeric(uadd)
27. {
28. **var** letters = /^[0-9a-zA-Z]+$/;
29. **if**(uadd.value.match(letters))
30. {
31. **return** **true**;
32. }
33. **else**
34. {
35. alert('User address must have alphanumeric characters only');
36. uadd.focus();
37. **return** **false**;
38. }
39. }
40. **function** countryselect(ucountry)
41. {
42. **if**(ucountry.value == "Default")
43. {
44. alert('Select your country from the list');
45. ucountry.focus();
46. **return** **false**;
47. }
48. **else**
49. {
50. **return** **true**;
51. }
52. }
53. **function** allnumeric(uzip)
54. {
55. **var** numbers = /^[0-9]+$/;
56. **if**(uzip.value.match(numbers))
57. {
58. **return** **true**;
59. }
60. **else**
61. {
62. alert('ZIP code must have numeric characters only');
63. uzip.focus();
64. **return** **false**;
65. }
66. }
67. **function** ValidateEmail(uemail)
68. {
69. **var** mailformat = /^\w+([\.-]?\w+)\*@\w+([\.-]?\w+)\*(\.\w{2,3})+$/;
70. **if**(uemail.value.match(mailformat))
71. {
72. **return** **true**;
73. }
74. **else**
75. {
76. alert("You have entered an invalid email address!");
77. uemail.focus();
78. **return** **false**;
79. }
80. }
81. **function** validsex(umsex,ufsex)
82. {
83. x=0;
85. **if**(umsex.checked)
86. {
87. x++;
88. } **if**(ufsex.checked)
89. {
90. x++;
91. }
92. **if**(x==0)
93. {
94. alert('Select Male/Female');
95. umsex.focus();
96. **return** **false**;
97. }
98. **else**
99. {
100. alert('Form Successfully Submitted');
101. window.location.reload()
102. **return** **true**;}
103. }
104. **function** formValidation()
105. {
106. **var** uid = document.registration.userid;
107. **var** passid = document.registration.passid;
108. **var** uname = document.registration.username;
109. **var** uadd = document.registration.address;
110. **var** ucountry = document.registration.country;
111. **var** uzip = document.registration.zip;
112. **var** uemail = document.registration.email;
113. **var** umsex = document.registration.msex;
114. **var** ufsex = document.registration.fsex; **if**(userid\_validation(uid,5,12))
115. {
116. **if**(passid\_validation(passid,7,12))
117. {
118. **if**(allLetter(uname))
119. {
120. **if**(alphanumeric(uadd))
121. {
122. **if**(countryselect(ucountry))
123. {
124. **if**(allnumeric(uzip))
125. {
126. **if**(ValidateEmail(uemail))
127. {
128. **if**(validsex(umsex,ufsex))
129. {
130. }
131. }
132. }
133. }
134. }
135. }
136. }
137. }
138. **return** **false**;
140. } **function** userid\_validation(uid,mx,my)
141. {
142. **var** uid\_len = uid.value.length;
143. **if** (uid\_len == 0 || uid\_len >= my || uid\_len < mx)
144. {
145. alert("User Id should not be empty / length be between "+mx+" to "+my);
146. uid.focus();
147. **return** **false**;
148. }
149. **return** **true**;
150. }
151. **function** passid\_validation(passid,mx,my)
152. {
153. **var** passid\_len = passid.value.length;
154. **if** (passid\_len == 0 ||passid\_len >= my || passid\_len < mx)
155. {
156. alert("Password should not be empty / length be between "+mx+" to "+my);
157. passid.focus();
158. **return** **false**;
159. }
160. **return** **true**;
161. }
162. **function** allLetter(uname)
163. {
164. **var** letters = /^[A-Za-z]+$/;
165. **if**(uname.value.match(letters))
166. {
167. **return** **true**;
168. }
169. **else**
170. {
171. alert('Username must have alphabet characters only');
172. uname.focus();
173. **return** **false**;
174. }
175. }
176. **function** alphanumeric(uadd)
177. {
178. **var** letters = /^[0-9a-zA-Z]+$/;
179. **if**(uadd.value.match(letters))
180. {
181. **return** **true**;
182. }
183. **else**
184. {
185. alert('User address must have alphanumeric characters only');
186. uadd.focus();
187. **return** **false**;
188. }
189. }
190. **function** countryselect(ucountry)
191. {
192. **if**(ucountry.value == "Default")
193. {
194. alert('Select your country from the list');
195. ucountry.focus();
196. **return** **false**;
197. }
198. **else**
199. {
200. **return** **true**;
201. }
202. }
203. **function** allnumeric(uzip)
204. {
205. **var** numbers = /^[0-9]+$/;
206. **if**(uzip.value.match(numbers))
207. {
208. **return** **true**;
209. }
210. **else**
211. {
212. alert('ZIP code must have numeric characters only');
213. uzip.focus();
214. **return** **false**;
215. }
216. }
217. **function** ValidateEmail(uemail)
218. {
219. **var** mailformat = /^\w+([\.-]?\w+)\*@\w+([\.-]?\w+)\*(\.\w{2,3})+$/;
220. **if**(uemail.value.match(mailformat))
221. {
222. **return** **true**;
223. }
224. **else**
225. {
226. alert("You have entered an invalid email address!");
227. uemail.focus();
228. **return** **false**;
229. }
230. } **function** validsex(umsex,ufsex)
231. {
232. x=0;
234. **if**(umsex.checked)
235. {
236. x++;
237. } **if**(ufsex.checked)
238. {
239. x++;
240. }
241. **if**(x==0)
242. {
243. alert('Select Male/Female');
244. umsex.focus();
245. **return** **false**;
246. }
247. **else**
248. {
249. alert('Form Succesfully Submitted');
250. window.location.reload()
251. **return** **true**;
252. }
253. }