**SERVLET Assignment and Questions**

1.) Write a Servlet to take name as request parameter from the user and display Welcome Page to the user with his name (with Get and Post HTTP methods).

2.) Write a Servlet with doGet method and extract all the request information along with the inputs given by the user in text field, radio button, checkbox and drop down menu.

3.) Create 2 HTML pages, one with GET method and one with POST method, with the action to the same Servlet. Handle both the requests using doGet and doPost methods.

4.) Write a Servlet to extract the multiple values sent with the request by the form with the same name.

5.) Write a Servlet class to extract names of the request headers, client’s browser information, cookies associated, the name of the HTTP method, remote port, local port, server port, content length. Justify the difference between Local Port and Server Port. Also use getIntHeader method and show how is it different from getHeader method.

6.) Write a Servlet class to download a file kept inside a folder within your application, on the request of the user. Take filename as input from the user and if file is not available show the appropriate message.

7.) Write a Servlet based query system, take query as input from the user in the textfield to extract the data from DataBase and display it to the user in tabular format.

8.) Write a Servlet program to redirect the request to some other page using sendRedirect method.

9.) Store email in DD as init-param name value pair. Write a Servlet to extract the initialization parameters inside the init method of your Servlet and display it within your service method.

10.) Write a Servlet program to override init method with ServletConfig parameter and repeat question (9).

11.) Write 3 Servlet classes and show one of them to the user based on the choice of the user taken as input by selecting Radio button.(You can use extra Servlet for logic part)

12.) In continuation to the above program,

a. ) Create a DD , store 3 parameter in the init param tag and one in the context param tag.

b. ) Display one out of 3 init params, on each of the servlet response based on some condition and context param with every response. Justify the difference between context param and init param.

13.) Write a Servlet Class to take empno as input from the user and update the salary of the user by calling the Stored Procedure and display the Updated Salary to the user.

14.) Write an application with 2 Servlet Classes. In one Servlet, get request information from the user and set the collected value as attribute at request and application scopes. Display both attribute values on request of both the Servlets and show the difference between attributes at both levels(scope).

15.) Write a Servlet class, implementing SingleThreadModel and explain the performance degradation occurring with that kind of implementation.

16.) Write a Servlet Class and create new session using the HttpSession object. Display session information to the user, including Session ID, Session creation time and Last Accessed time.

17.) Write an application with a login page,

a. Login Page requires Username and Password for Authentication (matching username and password, already present in DB) and sends request for Home Page.

b. On Authentication, User must be shown the Home Page (servlet) and Session must be created and maintained otherwise show appropriate error message.

c. On the Home Page display 2 links to other Servlets. Similarly other pages must have a link to Home Page.

d. Logout link must be there on all the servlets. User must be given access to all the pages with link to each other, as long as the session is valid. On click of Logout session must be invalidated. If session is destroyed user must be sent to Login Page Again.

18.) In addition to the above question,

a. Use DD configuration to set session time-out value and show how session expires after the specified time.

b. Use setMaxInactiveInterval method to set and overwrite the DD settings and verify the result.

19.) Use getSession(true) method in the above example and check for the condition when the old session is destroyed and new one is created, invalidate the session explicitly by calling invalidate method.

20.) Block (disable) the cookies in the client’s Browser and run the above program.

21.) Use the URL-Rewriting as fall-back mechanism in case the cookies are disabled by the browser with Question (5).

22.) Use Cookie Class object to store username at the Client machine sent by the user in question (5). Display the username retrieved on every page from the cookie object.

23.) Use ServletRequestListener on Home Page (servlet) to create DB connection object to be used for authentication in question(5).Use the HttpSessionEvent to destroy the DB connection object on creation of session in the question (5) .

24.) Write an application with 3 Servlets, 1 Database connection class and a ServletContextListener. Create one Database connection object, before request comes to any one of the 3 Servlet Classes. Use the connection object created, in all the 3 Servlets. 1st Servlet will handle request for emp table, 2nd for dept table and 3rd for salgrade table. Take input from the user in form of drop down menu. Display result in tabular format. Also provide synchronization to the shared database connection object.

25) Write a servlet code to do the following:

a) Get user ID and password parameters from Login.html file and set or create cookies of it.

b) Retrivethese set cookies and verify the user validity from the table. (Assume suitable table structure).