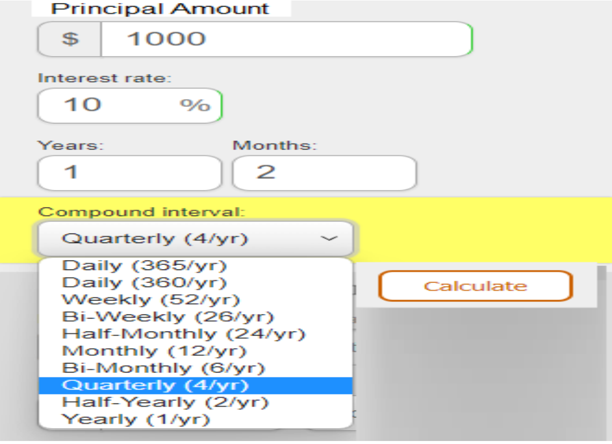
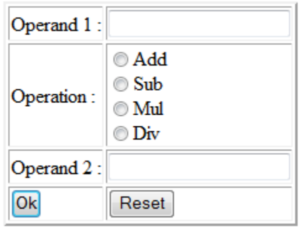
Department of Computer Science, Gujarat Vidyapith, Ahmedabad-380009

Academic Year : 2024-25 Semester: 2nd Subject : MCA-202: Web Technology ____________________ Enrollment No.: ______________

Student Name: ____ Subject Teacher: Kamalesh Salunke

No.	Problem Definition	Assignment / Submission Date	Sign of Teacher	Grade	Remark
1.	Create HTML form as following.  Principal Amount: $ 1000 Interest rate: 10 % Years: 1 Months: 2 Compound interval: Quarterly (4/yr) Daily (365/yr) Daily (360/yr) Weekly (52/yr) Bi-Weekly (26/yr) Half-Monthly (24/yr) Monthly (12/yr) Bi-Monthly (6/yr) Quarterly (4/yr) Half-Yearly (2/yr) Yearly (1/yr) Calculate Create a servlet that gets submitted values and calculate compound Interest. Note: Write JavaScript to validate the input fields. Formula A = $P (1 + R/(n*100))^{(nt)}$ A = the future value of the investment, including interest. P = the principal investment amount (the initial deposit or loan amount). R = the annual interest rate (decimal). n = the number of times that interest is compounded per unit t. t = the time the money is invested for, where t = no. of months/12 (E.g. 1year and 4 months so t = 16/12 = 1.333). Note: 1) Validate all inputs using JavaScript 2) Assumptions can be made wherever necessary.				
2.	Write servlet which prints the name and value for all its init parameters, details of HTTP request headers, client/browser, and server. Note: Assumptions can be made wherever necessary.				
3.	Design the registration page/form and write JavaScript to validate the following fields of the Registration page. 1. First Name (Name should contains alphabets and the length should not be less than 6 characters). 2. Last Name (Name should contain alphabets and the length should not be less than 6 characters). 3. Password (Password should not be less than 6 characters in length).				

	4. Conform Password (Password and conform password must be same). 5. E-mail (should not contain any invalid and must follow the standard pattern of email and it is unique and required field) 6. Mobile Number (Phone number should contain 10 digits only). 7. Address (should not be Empty). 8. Select user role (admin, registered user, guest etc.) from dropdown (required field) 8. Create a table user table to store the above details. 9. Write a servlet to insert data into the table Note: Assumptions can be made wherever necessary.				
4.	1. Use user table and create user-role table (email, role) 2. Design a good-looking login page which accepts and submits username as email and password. 3. Write JavaScript to validate inputs. 3. Write servlet to verify whether the user exists or not. 4. if exist, redirect to user's home page. Note: Assumptions can be made wherever necessary.				
5.	Write a CRUD application using servlet(s). Note: Assumptions can be made wherever necessary.				
6.	A web application using servlet that takes a name as input and on submit it shows a hello <name> page where name is taken from the request. It shows the start time at the right top corner of the page, display all session information, display the number of times a client has accessed it and provides a logout button. On clicking this button, it should show a logout page with Thank You <name > message with the duration of usage (hint: Use session to store name and time).				
7.	Design and develop JSP application to demonstrate 1. JSP Scripting elements 2. JSP Directives 3. JSP Implicit Objects 4. JSP Action tags				
8.	1. use user and user-role table that create in previous exercise. 2. Create a good-looking login form which accepts and submit username and password. 3. Validate all inputs using JavaScript. 4. Incorporate JSP Scripting elements, JSP Directives, JSP Implicit Objects, and JSP Action tags in your development. 4. Write JSP page to verify whether the user exists or not and perform following, 1. If the user does not exist, back to login page. 2. If user is exits and user-role is admin then redirect to "admin.jsp", else on "welcome.jsp" Note: Assumptions can be made wherever necessary. For redirection use <jsp:forward/>				

9.	1. Create a medicine search form. User can search medicine by medicine name or manufacturer name. 2. Create a medicine table (id, medicine-name, medicine-detail, manufacturer-name, batch-no, manufacturing month and year, expiry month and year.				
10.	1. Create Book table (bookId, title, author, price, Quantity, ISBN, publisher, edition year, catalogueId). 2. Create CRUD application using JSP(s).				
11.	1. Create HTML form as following  Operand 1 : Operation : ○ Add ○ Sub ○ Mul ○ Div Operand 2 : Ok Reset 2. Create a JavaBean for calculate and return result. 3. Write a JSP page to use/call JavaBean and display result using standard action tags. 4. Write JavaScript to validate the input fields.				
12.	Write XML file (planner.xml) according to the following information • planner as root element. • planner has one or more year element. • year contains one attribute ‘value’ and one or more child element date. • date has two attribute ‘moth’ and ‘day’ and one child element note. Write DTD that enforce above rules on XML				
13.	1. Write a DTD that will define the following structure for documents of type studentlist ○ A studentlist element consists of one or more student entries. ○ A student entry consists of the student’s enrollmentno, name, the study_ program in which the student is enrolled and enrolment_ year. ○ A student has an enrollmentno by which they can be uniquely identified. ○ A student’s name consists of three elements, the firstname, the middlename which is optional, and the lastname. ○ study_program contain values like are “BSc”, “MSc”, “MSW”, and “MBA” which is required. ○ enrolment_year is four-digit numbers like 2017 which is required. 2. Write XML file of a studentlist document and validate with your DTD.				

14.	1. Write a Schema that will define the following structure for documents of type studentlist ○ A studentlist element consists of one or more student entries. ○ A student entry consists of the student’s enrollmentno, name, the study_ program in which the student is enrolled and enrolment_ year. ○ A student has an enrollmentno by which they can be uniquely identified. ○ A student’s name consists of three elements, the firstname, the middlename which is optional, and the lastname. ○ study_program contain values like are “BSc”, “MSc”, “MSW”, and “MBA” which is required. ○ enrolment_year is four-digit numbers like 2017 which is required. 2. Write XML file of a studentlist document and validate with your DTD.				
15.	1. Write a XML Schema that will define the following structure for documents of type phonebook ○ • A phonebook is a root element and that consists of one or more department elements. ○ • A department element consists of the deptname, deptphone, deptemail, and one or more employee elements. ○ • A employee element consist of empid, empname, empphone, and empemail. ○ • An empid by which they can be uniquely identified. 2. Write XML file of a phonebook document and validate with your XML Schema.				
16.	Design and Develop MVC based User Management web application that manages a collection of users with the basic features: list, insert, update, delete (or CURD operations - Create, Update, Read and Delete). **Development Steps:** 1. Create an Eclipse/NetBeans Dynamic Web Project 2. Add Dependencies 3. Project Structure 4. MySQL Database Setup 5. Create a JavaBean - User.java 6. Create a UserDAO.java 7. Create a UserServlet.java 8. Creating User Listing JSP Page - user-list.jsp 9. Create a User Form JSP Page - user-form.jsp 10. Creating Error JSP page 11. Deploying and Testing the Application				
17.	Design and develop JSP based application using JSP using JSTL tags.				

Grade	A	B	C	D	E	F	S
Marks	18 - 20	14-17	11-13	8-10	5-7	1-4	Absent