

Branch Name:	IMCA
Program Code:	CS301
Course Name:	ADVANCED JAVA PROGRAMMING PRACTICAL
Course Code:	1CS3010501P
Pre-requisite Course:	Knowledge of core Java Programming

Course Objectives:

- To understand the concepts of Database Programming using JDBC.
- To get a better understanding of developing web-based applications using Servlets & JSP.
- To understand the concept of developing web-based applications using MVC Architecture.

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)				
Lecture	Tutorial	Practical	Credit	Theory		Practical		Total
				University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	
-	-	3	3	-	-	25	25	50

LAB/ Practical:

Note: The practical list provided beneath is for reference only. The course teacher may Change/formulate it as per his/her methodology and requirement.

Sr.No	Practical Experiments										
1.	<p>1.1 Develop a database application that uses any JDBC driver successfully connected and print proper message on console like "Connection Established".</p> <p>1.2 Develop a console application to retrieve and display the content of database record on console.</p> <p>1.3 Develop a program to perform the database driven operation like insert, Delete, Update and select. To perform the above operations, create one table named Product.</p> <table border="1" data-bbox="646 1272 1086 1496"> <thead> <tr> <th>Field Name</th> <th>Field Type</th> </tr> </thead> <tbody> <tr> <td>Product_Id</td> <td>Integer</td> </tr> <tr> <td>Product_Name</td> <td>Varchar</td> </tr> <tr> <td>Product_Qty</td> <td>Numeric</td> </tr> <tr> <td>Product_Price</td> <td>Numeric</td> </tr> </tbody> </table> <p>1.4 Develop a Graphical User Interface that performs the following SQL operations: a) Insert b) Delete c) Update.</p>	Field Name	Field Type	Product_Id	Integer	Product_Name	Varchar	Product_Qty	Numeric	Product_Price	Numeric
Field Name	Field Type										
Product_Id	Integer										
Product_Name	Varchar										
Product_Qty	Numeric										
Product_Price	Numeric										
2.	<p>2.1 Write a Servlet to display "Hello World" on browser.</p> <p>2.2 Write a Servlet to display all the headers available from request.</p> <p>2.3 Write a Servlet to display parameters available on request.</p> <p>2.4 Develop a Servlet to authenticate a user, where the loginid and password are available as request parameters from database table Login. In case the authentication is successful, it should setup a new session and store the user's information in the session before forwarding to home.jsp, which displays the user's information like full name, address, etc.</p> <p>2.6 Develop an interest calculation application in which user will provide all information in HTML form and that will be processed by servlet and response will be generated back to the user.</p> <p>2.7 Develop an application to demonstrate how the client (browser) can remember the last time it visited a page and displays the duration of time since its last visit. (Hint: use Cookie)</p>										

3.	<p>3.1 Write a simple JSP page to display a simple message (It may be a simple html page).</p> <p>3.2 Write a JSP page, which uses the include directive to show its header and footer.</p> <p>3.3 Write a JSP Page to use JSP scripting elements.</p> <p>3.4 Develop an application to write a "page-composite" JSP that includes other pages or passes control to another page. (Hint: Use <jsp:include> or <jsp:forward>).</p> <p>3.5 Develop a JSP Page to display the personal information and result information of the student in two different tabular formats.</p> <p>3.6 Develop a JSP Page to perform database driven operations like insert, Delete, Update and selection with table named Student having fields like StudId, Name, Address, result.</p>
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Reference Books:

1. Ivan Bayross, "Web Enabled Commercial Application Development Using HTML, DHTML
2. Subrahmanyam Allamaraju, "Professional Java Server Programming J2EE 1.3 Edition", Apress (2007).
3. Marty Hall, Larry Brown, Yaakov Chaikin, "Core Servlets and Javasever Pages Volume – 2", Pearson Education, 2nd ed.(2004)

Course Learning Outcomes (CLO): On completion of this course, the students will be able to:

CLO	Description	Bloom's Taxonomy Level
CLO1	Create Web applications using Servlets and JSP.	6. Creating
CLO2	Fetch data from a database server and use it in a web application.	2. Understanding 4. Analyze 3. Applying
CLO3	Create Web applications using JSP.	4. Analyze 3. Applying
CLO4	Learn to access database through Java programs, using Java Database Connectivity (JDBC)	2. Understanding 3. Applying
CLO5	Apply the concepts of server-side technologies for dynamic web applications	5. Evaluate 3. Applying
CLO6	Create web applications by following MVC architecture.	1.Remembering 6. Creating

Mapping of CLOs with POs & PSOs

Course Learning Outcomes	Program Outcomes (POs)												Program Specific Outcomes (PSOs)	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CLO1		H	H	M	H		L					M	H	H
CLO2		H	H	M	M	L		M		H			H	M
CLO3					M	H		M					H	M
CLO4		M	M	M		M		M	M					M
CLO5		H	H	M	H	M	H	M	H					
CLO6		H	H		H			M		L		M	H	H

H: High, M: Medium, L: Low