

5 Years Integrated M.Sc. (IT) 7th Semester Practical List

060010710: Java Framework

Practical No : 1	Enrollment No:
Practical Problem	<p>1. Develop a web application called Student Information System(SIS) and provide below functionality in it.</p> <ol style="list-style-type: none"> 1. Add new students. (Must enter details like name, address, birthdate, student contact no, parents contact no, Semester. Enrolment number must be auto generated.) 2. Remove existing student. (Before removing student information, it must be display on the page and notify it before removing.) 3. Change existing student information. (User cannot change enrolment number.) <p>System enters the detail in following table. Student(ENumber,Name,Address,Birthdate,ContactNo,PContact No,Semester)</p> <p>Note:</p> <ol style="list-style-type: none"> 1. Use Business Service Methods. 2. Give appropriate validation. <p>2. Student Information System is working well but once subject teacher enters the details of lectures he/she cannot remove the entry, provide solution of it. System enters the detail in following table. Lecture(Lno,Semester,Date,TotalNoOfPresentStudent,TotalNoOf AbsentStudent,Description)</p> <p>Note:</p> <ol style="list-style-type: none"> 1. Use the concept of Business Service Method. 2. Apply Appropriate Validation. <p>3. BMIIT wants to add one more facility in Student Information System, by which counsellor can check present or absent students according to subject wise. Help BMIIT by developing this facility. System enters the details in following table. Lecture(Semseter,SubjectName,EnrollmentNo,StudentsName,St atus{Present/Absent})</p> <p>Note:</p> <ol style="list-style-type: none"> 1. Apply Appropriate Validation. 2. Use the Concept of Model Driven. <p>4. TCS organise one competition for IT students in which students have to create one web application for bank with following functionality.</p> <ol style="list-style-type: none"> 1. Registration of net banking. (At the time of registration take debit card number and pin number as an input. If both are correct then provide customerid and password to the user. Customerid is a last 4 digits of debit card

	<p>number and password is customer pin number.)</p> <ol style="list-style-type: none"> 2. Allow customer to transfer money. (Assume that you are transferring money within the same bank. At the time of transfer take account number and money as an input. When User enter account number, Customer name should be display. Before transfer check balance and give appropriate validation.) 3. Check balance. (At the time of checking balance take account number as an input and display information like name, contact number and balance.) 4. Check past transaction. 5. Change password. <p>Note:</p> <ol style="list-style-type: none"> 1. Before doing any transaction, user must login through customer id and password. 2. Apply Appropriate Validation. 3. Use the Concept of Business Service Method and Model Driven. 4. Create tables according to your needs. 	
Objective(s)	Student shall be able to perform different operations using MVC design pattern.	
Pre-requisite	Core java concepts, XML, Developing Web application using Servlets and JSP.	
Duration for completion	10 Hours	
PEO(s) to be achieved	<i>PEO2: To provide quality practical skill of tools and technologies to solve industry problems.</i>	
PO(s) to be achieved	<i>PO6: Ability to use the techniques, skills and modern tools as necessary for software development</i>	
CO(s) to be achieved	<i>CO1: Understand the architecture of MVC and Struts2 by carrying out struts application using action classes and resource bundle.</i>	
Solution must contain	Struts.xml and all the classes which are created in the application.	
Nature of submission	Handwritten	
References for solving the problem	<ol style="list-style-type: none"> 1. Struts 2 Black Book - Dreamtech Press 2. http://www.javatpoint.com/struts-2-tutorial 3. http://www.tutorialspoint.com/struts_2/index.htm 	
Post Laboratory questions	<ol style="list-style-type: none"> 1. Why we create filter tag in web.xml? 2. Is it compulsory to create struts.xml? If yes then why we create? 3. Create namespace for this application. 4. What is the use of action tag in struts.xml? 	
Assessment		
Faculty Name and Signature		
Date		

Practical No : 2	Enrollment No:
Practical Problem	<p>1. Develop an application by which login verification will be perform by interceptor. After successful login display user information. Assume that user details are stored in below tables. UserAccount(Username,Password) UserDetails(Username,DateOfBirth,Address,ContactNo,Email-id)</p> <p>2. UGC create one web application for applying in NET exam, but Whenever user tries to do registration between 9:00 am to 9:00 pm they are facing problem due to large no of request, provide solution of it. User information will be stored in below tables. Login(Username,Password) User(Username,Name,DateOfBirth,Address,ContactNo,Education,Percentage) Note:</p> <ol style="list-style-type: none"> 1. Check Below condition at the time of registration. <ul style="list-style-type: none"> ➤ Name must be in capital letter. ➤ All fields are compulsory. ➤ For login user name must be email id. 2. After successful registration store details in above tables. 3. Use the concept of interceptor for all the validation.
Objective(s)	Student shall be able to develop application using converter class, Interceptor.
Pre-requisite	Core java concepts, XML, Developing Web application using Servlets and JSP.
Duration for completion	6 hours
PEO(s) to be achieved	<i>PEO2: To provide quality practical skill of tools and technologies to solve industry problems.</i>
PO(s) to be achieved	<i>PO6: Ability to use the techniques, skills and modern tools as necessary for software development</i>
CO(s) to be achieved	<i>CO2: Make a use of Interceptor, OGNL and type conversion.</i>
Solution must contain	Struts.xml and all the classes which are created in the application.
Nature of submission	Handwritten
References for solving the problem	<ol style="list-style-type: none"> 1. Struts 2 Black Book - Dreamtech Press 2. http://www.javatpoint.com/struts-2-tutorial 3. http://www.tutorialspoint.com/struts_2/index.htm
Post Laboratory questions	<ol style="list-style-type: none"> 1. Write two usage of interceptor. 2. For doing validation which action class will be use? 3. Which tag will be used to declare pre define interceptor in struts.xml?

	4. What is the need of converter class in struts2 application?	
Assessment		
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Practical No : 3	Enrollment No:
<p>Practical Problem</p>	<p>1. Bardoli Nagar Palika wants to create web portal by which people of Bardoli can search people, pay the tax online. Before performing any operation Adhaar No must be use as a login so people do not need to do registration in web portal. Whenever user pay tax, basic details (like name,address,areaCode,Tax,etc.) must be display automatically so people do not need to fill details.</p> <p>Note:</p> <ul style="list-style-type: none"> ➤ Perform validation using x-Work framework. ➤ Adhaar No must start with A, followed by AreaCode and digit. For Example; if my area code is B09 then my adhaar no must be "AB091120". ➤ People have to pay the tax according to area wise tax rate. ➤ The below tables are for your reference, developer can create their own tables as per the operation. <p>Consider following tables.</p> <p>Citizen(AdhaarNo, Name, Address, AreaCode, Area_in_Sq_meter)</p> <p>Tax(AreaCode, Tax_Rate_per_Sq_meter)</p> <p>TaxPayment(PaymentDate, AdhaarNo, Amount)</p> <p>2. Bardoli Khadi Bhandar wants to create one web application to upgrade their business. In application there are two users one is "Admin" and another is "Customer {Register/Guest}". Provide following functionality in web application.</p> <ol style="list-style-type: none"> i. Registration of a new user. ii. Register user can purchase product after login. iii. Whenever customer purchase product, necessary updation must be reflected in database. <p>Note:</p> <ul style="list-style-type: none"> ➤ Provide appropriate validation wherever necessary. ➤ Uid must be auto generated and unique. ➤ After registration create password for a new user and insert Uid and Password in Login detail. Format of Password is first two character of name and then Uid. For Example: If Uid is "101" and name is "Shiv" then password must be "Sh101". ➤ The below tables are for your reference, developer can create their own tables as per the operation. <p>Consider following tables.</p> <p>User(Uid,Name,Address,ContactNo)</p> <p>Login(Uid>Password)</p> <p>Product(Pid,Pname,Stock,Price/quantity)</p> <p>Purchase(Ppid,Pid,TotalaAount,Date,Uid)</p>

Objective(s)	Student shall be able to integrate x-work framework with Struts2 as well as they can create their own custom validators.	
Pre-requisite	Core java concepts, XML, x-work framework.	
Duration for completion	6 hours	
PEO(s) to be achieved	<i>PEO2: To provide quality practical skill of tools and technologies to solve industry problems.</i>	
PO(s) to be achieved	<i>PO6: Ability to use the techniques, skills and modern tools as necessary for software development</i>	
CO(s) to be achieved	<i>CO4: Managing the validator as per special requirement.</i>	
Solution must contain	Validation configuration file, struts.xml, Source file.	
Nature of submission	Handwritten	
References for solving the problem	<ol style="list-style-type: none"> 1. Struts 2 Black Book - Dreamtech Press 2. http://www.javatpoint.com/struts-2-tutorial 3. http://www.tutorialspoint.com/struts_2/index.htm 	
Post Laboratory questions	<ol style="list-style-type: none"> 1. Advantages of x-work framework. 2. Define field validators. 3. What is non-field validators? 4. Which class is used to create custom validators? 	
Assessment		
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Date		

Practical No : 4	Enrollment No:	
Practical Problem	<p>3. The developers of ABC Infotech company is developing web application by which their employee's information and salary related operation can maintain easily. In web application developers want to use the concept of Dependency Injection for database operation, and want to create their own templates for displaying data dynamically. Help developers of ABC Infotech.</p> <p>4. Consider the Program 1(1) and perform database operation using hibernate.</p>	
Objective(s)	Student shall be able to integrate other framework(like Spring and Hibernate) with Struts2 as well as they can create their own templates.	
Pre-requisite	Core java concepts, XML, Developing Web application using Spring,Hibernate.	
Duration for completion	6 hours	
PEO(s) to be achieved	<i>PEO2: To provide quality practical skill of tools and technologies to solve industry problems.</i>	
PO(s) to be achieved	<i>PO6: Ability to use the techniques, skills and modern tools as necessary for software development</i>	
CO(s) to be achieved	<i>CO6: Understand the various result type and integration of Struts2 with other framework.</i>	
Solution must contain	Source file, output	
Nature of submission	Handwritten	
References for solving the problem	<p>4. Struts 2 Black Book - Dreamtech Press</p> <p>5. http://www.javatpoint.com/struts-2-tutorial</p> <p>6. http://www.tutorialspoint.com/struts_2/index.htm</p>	
Post Laboratory questions	<p>5. What is Dependency Injection?</p> <p>6. Define ORM.</p> <p>7. What is the use of ContextLoaderListener?</p> <p>8. What is Hibernate Query Language?</p>	
Assessment		
Faculty Name and Signature		
Date		