



LAB WORKBOOK

17CS3116 ENTERPRISE PROGRAMMING

Team EP

K L UNIVERSITY | ENTERPRISE PROGRAMMING – 17CS3116



LABORATORY WORKBOOK

STUDENT NAME	
REG. NO	
YEAR	
SEMESTER	
SECTION	
FACULTY	

Table of Contents

1. Organization of the STUDENT LAB WORKBOOK	3
2. HTML-CSS-JS #1.....	6
3. JAVASCRIPT #2.....	18
4. JS DOM and Validations #3	25
5. JDBC #4.....	32
6. Servlets - 1 #5	53
7. Servlets - 2 #6.....	65
8. JSP(Java Server Pages) -1 #7	74
9 JSP(Java Server Pages)-2 #8.....	81
10 Session Handling#9.....	93
11 Hibernate-1#10... ..	104
12 HQL, HCQL #11	119
13 Inheritance Mapping #12.....	131
14 Spring Framework #13... ..	147
15 Spring-Hibernate Integration #14... ..	163
16 Spring-DAO,MVC #15... ..	177

Organization of the STUDENT LAB WORKBOOK

The laboratory framework includes a creative element but shifts the time-intensive aspects outside of the Two-Hour closed laboratory period. Within this structure, each laboratory includes three parts: Prelab, In-lab, and Post-lab.

a. Pre-Lab

The Prelab exercise is a homework assignment that links the lecture with the laboratory period - typically takes 2 hours to complete. The goal is to synthesize the information they learn in lecture with material from their textbook to produce a working piece of software. Prelab Students attending a two-hour closed laboratory are expected to make a good-faith effort to complete the Prelab exercise before coming to the lab. Their work need not be perfect, but their effort must be real (roughly 80 percent correct).

b. In-Lab

The In-lab section takes place during the actual laboratory period. The First hour of the laboratory period can be used to resolve any problems the students might have experienced in completing the Prelab exercises. The intent is to give constructive feedback so that students leave the lab with working Prelab software - a significant accomplishment on their part. During the second hour, students complete the In-lab exercise to reinforce the concepts learned in the Prelab. Students leave the lab having received feedback on their Prelab and In-lab work.

c. Post-Lab

The last phase of each laboratory is a homework assignment that is done following the laboratory period. In the Post-lab, students analyse the efficiency or utility of a given system call. Each Post-lab exercise should take roughly 120 minutes to complete.

2019-20 ODD SEMESTER LAB CONTINUOUS EVALUATION

Sl No	Date	Experiment Name	Pre-Lab (5M)	In-Lab				Post Lab (5M)	Viva Voce (5M)	Total (50M)	Faculty Signature
				LOGIC (10M)	EXECUTION (10M)	RESULT (10M)	ANALYSIS (5M)				
1											
2											
3											
4											
5											
6											
7											
8											

2019-20 ODD SEMESTER LAB CONTINUOUS EVALUATION

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				LOGIC (10M)	EXECUTION (10M)	RESULT (10M)	ANALYSIS (5M)				
9											
10											
11											
12											
13											
14											
15											

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
SUBJECT CODE: 17CS3116
ENTERPRISE PROGRAMMING WORKBOOK

HTML-CSS-JS #1

Date of the Session: ____/____/____

Time of the Session: _____ to _____

Prerequisite:

- General idea of how webpages are built.
- General Idea on the main language or platform used for web-design.
- Idea on tags of HTML, CSS and JavaScript.

Pre-Lab Task:

- 1) What is the full form of HTML?
- 2) What is the full form of CSS?
- 3) Write down the functionalities and syntax of the below mentioned tags in HTML.
 - a) `<!DOCTYPE>`
 - b) `<div>`
 - c) `<head>`

d) `<body>`

e) `<h1>` to `<h6>`

f) ``

g) `<div>`

h) `<form>`

i) ``

j) `<title>`

4) Write down the functionalities of the below mentioned in CSS.

a) @import

b) padding

c) background

d) border

e) border-radius

f) position

g) font-family

- 5) As you're in the very beginning stage of learning how to build websites. Let's begin by writing a small code in HTML. Please follow the below instructions in order to complete the task.
- a) Write the basic required syntax for the HTML document and save the file with .html format.
 - b) Then, write the heading as "Basic HTML Program" into the document.
 - c) Write the paragraph as "This is the trail program for building my skills in HTML".
 - d) Insert an image of your choice and specify the width to be 200px.

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In Lab Task:

1. Ricky Dowlin and his friends are in very starting stage of learning and experimenting how to build a website, they wanted to build their personal blogs with a standard requirement as mentioned below in order to have all their personal blogs to be same.
 - a. They want webpage to be segregated into 3 divisions namely header, body, footer.
 - b. They want the background color to be **black**.
 - c. They named their website title to be **Ricky Dowlin**.
 - d. They wanted the main heading in the website to be as their name along with personal blog and wanted it to be displayed in the middle of the header division.
 - a. Ex: If the name is Ricky then the heading would be **Ricky's Personal Blog**.
 - e. They wanted header color to be **skyblue** and the font color need to be **black**, they even wanted to have the font to be **helvetica**.
 - f. In the body division they need to get an image inserted in the center having the dimensions of **width = 300** and **height = 300**.
 - g. Now they need to write their biodata below to the image inserted.
 - h. After inserting the biodata Ricky wants the user to review his blog. So he want to write a line specifying "**Please review my blog**" and place a **RATE** button below that.
 - i. They wanted footer containing "**copyrights reserved ©**" in **antique white** color and wanted to align in the **center** of the footer.

Writing space for the Problem:(For Student's use only)

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Writing space for the Problem:(For Student's use only)

2. After looking at your webpage they wanted you to also do the review form for their personal blog. The form should be created in another webpage. The form webpage needs to be linked by using the button naming “**Rate**” in the first webpage and should have the following details:

NAME (max 30 characters a-z and A-Z)

Date of birth:

Month ▼
Month
1
2
3
4
5
6
7
8
9
10
11
12

Date ▼

Year ▼

GENDER ☐ Male ☐ Female

RATE THE BLOG ☐ GOOD ☐ NOTBAD ☐ CAN IMPROVE

Writing space for the Problem:(For Student’s use only)

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Post Lab Task:

1. What is JavaScript and what are the advantages of JavaScript?
2. What are the features of JavaScript?

3. Honey is learning JavaScript and she wanted to write a program in which she wants to read two number from the console and add them. After adding them she wants to check whether it is an Even number or Odd number and print the output. Help Honey by writing the code.

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JAVASCRIPT #2

Date of the Session: ____/____/____

Time of the Session: ____ to ____

Prerequisite:

- Basic idea on JavaScript Arrays and objects.

Pre-Lab Task:

Problem Description

1. Jack and Jill were participating in a coding rivalry. There are 4 rounds to be a finalist. In the first round the two of them were asked to illuminate the inquiry on strings wherein the inquiry was plainly referenced that the lowercase letters should be changed over as uppercase letters and the uppercase letters should be changed over into lowercase letters. In this way, would you be able to help Jack and Jill to tackle their concern by executing the code in JavaScript.

For example,

INPUT: This is a Coding Competition

OUTPUT: tHIS IS A cODING cOMPETITION

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In Lab Task:

1. Ibrahim is a making site to take care of mathematics issues in all respects effectively. To do this he has to make a calculator as a piece of site. Can you help him by making a calculator?
 - a. Create a button for each operation.
 - b. Display the obtained result on a new window.

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Post Lab Task:

1. John, a curator in University of Michigan needs to sort every one of the books depends on title of the book in Alphabetical request to keep up the record of books present in the library. He was supposed to write a program to sort all the book titles in Alphabetical order and place them accordingly. To compose the code he needs some assistance from a coder who can code. So, implement a code in JavaScript where you'll be taking array of objects as input and sort them alphabetically based on the title of the book.

Sample object:

```
var library = [  
  {author: 'Bill Gates', title: 'The Road Ahead', libraryID: 1254},  
  {author: 'Steve Jobs', title: 'Walter Isaacson', libraryID: 4264},  
  {author: 'Suzanne Collins', title: 'Mockingjay: The Final Book of The Hunger Games',  
    libraryID: 3245}  
];
```

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JS DOM and Validations #3

Date of the Session: ____/____/____

Time of the Session: ____ to ____

Prerequisite:

- General Idea on JavaScript DOM and Validations.
- Idea on Event Listener and onchange Events.

Pre-Lab Task:

1. Drishti and Shiv are playing Ludo and they lost their dice. Since Drishti is a coder she thought to write a code in JavaScript in which it generated a random number between 1 to 6 on clicking a button, and she wanted to add a feature that when the number generated is odd, the background changes to red otherwise the background changes to green. Assuming you as Drishti implement a code in JavaScript.

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In Lab Task:

1. Rohan wants to watch a horror movie. He is filling his details in the form given by ABC ticket booking app. Create a form which follows following condition (Use JavaScript validations)
 - a. Create first name and last name columns. Once user leaves the column, input must change to uppercase. (Use onchange event)
 - b. Create an age column using the type “text”. Validate the input and show an error message if age is less than 18.
 - c. Create phone number field and make it mandatory field. Validate the input and show a message if any error.
 - d. Create an email id field with the type “email” and make the field mandatory.
 - e. Create a dropdown list to select number of tickets.
 - f. Create a checkbox saying I accept to all terms and conditions and make it mandatory field.
 - g. Finally create a submit button which gives an alert message “Do you want to submit? (Use Event Listener)

Writing space for the Problem:(For Student’s use only)

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Post Lab Task:

1. Natasha is given with different set of values and she wants to validate which value is number and which is not. Help her solve this problem using JavaScript.

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JDBC #4

Date of the Session: ___/___/___

Time of the Session: _____ to _____

Prerequisite:

- How a java program is connected to database
- Basic SQL commands to perform 'crud' operations

Pre-Lab Task:

1.
 - a. List out different kinds of JDBC drivers.
 - b. Write the steps involved in connecting any java application with data base using JDBC.

c. Write a small description and syntax for the following methods:

i. `forName()`

ii. `registerDriver()`

iii. `getConnection()`

iv. `createStatement()`

v. `prepareStatement()`

vi. `executeQuery()`

vii. `executeUpdate()`

viii. `close()`

ix. `setBinaryStream()`

x. `setCharacterStream()`

xi. `available()`

2. Write a java program which executes the given SQL queries.

(NOTE: create a table 'student' with attributes to store the student's id(number),name(varchar2),age(number) manually in database)

- Add the following records into the 'student' table.

<u>id</u>	name	age
1	Felix	20
2	jack	19
3	mark	21

- Print the details of the students whose age is less than 21.

Writing space for the Problem:(For Student's use only)

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3. A student joined in the class; teacher gave the first assignment to the student. The teacher wants the student to take the input from the user about their username and password, and check these against the registered user table in your database. Teacher gave a suggestion to solve the problem by using the PreparedStatement class in the JDBC API. What would be the answer for assignment.

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Writing space for the Problem:(For Student's use only)

In Lab Task:

1. Dany went to the kings landing supermarket and bought some groceries. As a vendor you have to ask the numbers of items she bought and store the itemid, itemname, cost of the items and store them in the 'sales' table of database and also execute an SQL query to find the total cost and list out the item she bought.

Writing space for the Problem:(For Student's use only)

2. A course tutor James of a new class has the ID numbers of the students enrolled into his class. He needs to make a database to store student's name, date of birth and email address. He wants to embed all the id numbers into the database at first and afterward update it by the details given by the student himself on his first class. Help James by doing following things
- a) Create a new table namely Student in the Oracle Database with columns: Student_ID, Student_Name, Email, Date_of_Birth.
 - b) Write a java program to embed id numbers into the database. The program ought to ask the user whether he/she wants to enter the ID number in loop. It should continue if the option is 'yes' and terminate if the option is 'no'. Every time in the loop it should take an ID number as an input from console and insert it into the database in a new row.(Note that the values of the columns other than the Student_ID remain null).
 - c) Write another java program which asks the ID number of the student. If the number is in the database, then the program should ask the Student's name, email address and the date of birth of that student and update the database with the received information at the respective row. The data collection should be repeated by asking every time, whether the user wants to continue entering the details of the next student or not.
 - d) Write the java program to see the whole database in a formatted way(along with column headings).

Writing space for the Problem:(For Student's use only)

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3. A workshop based on web development is being conducted in the university. Now James wants to know how many members of his class are interested in it and their details.
- He needs to collect ID numbers and contact numbers of the interested students in a new table namely Workshop.
 - He wants to retrieve name and email address from the student table and update the Workshop table by creating 2 new columns and inserting the respective details.(note that the student table is the one created in the previous problem).
 - If a student, suddenly wants to drop from attending the workshop, James is supposed to delete the student's data from workshop table.

Write the Java programs for the above situations using JDBC API.

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Post Lab Task:

1. Tony is a wildlife photographer. He went to Amazon rainforest to explore the beauty of the flora and fauna. He captured pictures of different trees and animals. He also described each animal and plant in a separate notepad. Now he wants to save the name, the category (animal / plant), its image and the description file of the species into a database. Help Tony by providing him with an executable java program.
 - a. Create a table with columns Name, Category, Image and Description_File before executing the file.
 - b. The name, category, path of the image(.jpg), path of the description file (.txt) should be read as input from the console.

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Writing space for the Problem:(For Student's use only)

2. After exploring the dense forest, Tony returns to home and wants to publish his work in a magazine. He is supposed to give the information to the publisher in the following way.
 - a. Two folders namely Animals and Plants should be created on desktop
 - b. The image of every animal should be saved as "animal_name.jpg" and the description file as "animal_name.txt" in the Animal folder
 - c. Similarly, the image of every plant should be saved as "plant_name.jpg" and the description file as "plant_name.txt" in the Plant folder

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ENTERPRISE PROGRAMMING WORKBOOK

Servlets - 1 #5

Date of the Session: ____/____/____

Time of the Session: _____ to _____

Prerequisite:

- Servlets and their applications.
- ‘CRUD’ operations in SQL.

Pre-Lab Task:

1. Write a note on servlet and its life cycle.
2. Draw the Structure of directories that are to be created under Tomcat’s ‘webapps’ folder.

3. Create a project named 'myservice' and using servlets make a service which prints "Welcome to Servlets!!" on to the server console. The class must be named 'FirstServlet' and the URL pattern must be '/your_name'.

Add another service into the same 'myservice' project which prints "Bye to Servlets!!" on to the server console. Name the class 'SecondServlet' and set URL pattern to '/your_name143'. (Hint: Modify the 'web.xml' file by adding another servlet name and URL pattern.)

Check the working condition of both the services.

Writing space for the Problem:(For Student's use only)

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In Lab Task:

1. A professor from K L University after 21 years of Work has decided to retire from his job and before he leaves, he wants to get feedback about him from all his students. As you are his favorite student, he asked you for help.
 - a. Make a Web app using servlets in which the students must first register and then login into it with the registered credentials.

Writing space for the Problem:(For Student's use only)

(Hint: Create Index.html file where student enters data like name, ID, username, password and any other attributes if required. Create a table in database with the same attributes. By establishing JDBC connection, link html file to a java file where data entered is stored into database. Do the same to create Login form where a java file is written to check if the username and password are matching with the values in database. Finally create a web.xml file)

Writing space for the Problem:(For Student's use only)

Writing space for the Problem:(For Student's use only)

- b. After successful login, display remarks page where students can type and submit their views in it. Login credentials and remarks must be stored into 'farewell' table in database. Professor wants everyone to register and login because he wants to know how every particular student think about him.

Writing space for the Problem:(For Student's use only)

(Hint: Create index.html file with text field to enter remarks. Write a java file to store remarks into farewell table.)

Writing space for the Problem:(For Student's use only)

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Post Lab Task:

1. Create a login Servlet which on login retrieves and Displays the Previous Remark Given by you. You must also provide an Update Remark Text Field in which the student can type a new remark and replace the previous remark with it. For login, use the credentials that are in the ‘farewell’ table. **Use Eclipse IDE for ease of the task.**

Writing space for the Problem:(For Student’s use only)

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(For Evaluator's use only)

<p><u>Comment of the Evaluator (if Any)</u></p>	<p><u>Evaluator's Observation</u></p> <p>Marks Secured: _____ out of _____</p> <p>Full Name of the Evaluator:</p> <p>Signature of the Evaluator Date of Evaluation:</p>
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Servlets - 2 #6

Date of the Session: ___/___/___

Time of the Session: _____ to _____

Prerequisite:

- Concepts of Init and context Parameters.
- Request Dispatcher functionality.
- Send Redirect Method usage.

Pre-Lab Task:

1. Sam is getting registered in a degree college. He has to take up online registration process for which he needs url of college website, username, password. Like sam there are many students who need to register online. For every person there is unique username and password. For letting them know their credentials, create servlets for say 3 persons. Set url as context parameter and unique username and password as respective init parameters. Print url, username and password of each servlet. Try accessing username and password of one student from another student's servlet.

Writing space for the Problem:(For Student's use only)

Writing space for the Problem:(For Student's use only)

2. Use forward() of request dispatcher interface to forward date from 1st servlet to 2nd servlet which contains system time. Print them on the webpage.

Writing space for the Problem:(For Student's use only)

In Lab Task:

1. Online tests have become common these days. To evaluate these online tests using servlets, build an evaluation servlet. Create servlets for each student whose init parameters are answers to MCQ questions. Correct answers are set as context parameters. In each servlet compare answers with correct marks and calculate score. This score must be forwarded to another servlet which prints student marks.

Writing space for the Problem:(For Student's use only)

(Hint: Create a web.xml file and set answers of each student as init parameter in respective servlet. Set correct answers as context parameters of servlet. In java file, retrieve the init and context parameters and compare them. If both of them match, increase score by one. Use forward() to forward calculated scores to another servlet and print result.)

Writing space for the Problem:(For Student's use only)

2. Ben made a web app which reads a password and checks the strength of it, if all the characters are of lowercase and no numbers in it then it must forward to a servlet which displays a message "The password must contain at least one uppercase and number in it.". If all the characters are uppercase and no number then it must forward to a servlet which displays "The password must contain at least a lowercase and a number in it.". If all the characters are numbers it must include to a servlet which displays "The password is very weak!!". The main servlet must print the requirements of the password as "The password must contain an upper case, lower case and a number in it!!!"

Writing space for the Problem:(For Student's use only)

(Hint: Create index.html file with password field in it. In a java file check if the password is satisfying given constraints. If not forward to another servlet displaying appropriate message and another password field to re-enter password.)

Writing space for the Problem:(For Student's use only)

Post Lab Task:

1. Use sendRedirect() to open google and search keywords stored in database. Establish jdbc connection by setting url of database as context parameter and username, password as init parameters.

Writing space for the Problem:(For Student's use only)

Writing space for the Problem:(For Student's use only)*(For Evaluator's use only)*

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ENTERPRISE PROGRAMMING WORKBOOK

JSP(Java Server Pages)-1 #7

Date of the Session: ____/____/____

Time of the Session: _____ to _____

Prerequisite:

- Knowledge of JSP.
- Basic SQL commands to perform ‘CRUDs’ operations

Pre-Lab Task:

1. Clarify in detail each phase of JSP lifecycle.

Writing space for the Problem:(For Student’s use only)

2. Print Current date and time on the screen utilizing JSP.

Writing space for the Problem:(For Student's use only)

In Lab Task:

1. Julie needs to set up a startup. Help her create registration page for web based shopping entrance made by her. Make an enrolment page where users can create an account for themselves.

Writing space for the Problem:(For Student's use only)

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Writing space for the Problem:(For Student's use only)

Post Lab Task:

1. From previous problem, after client registers, demonstrate a login page where client can login just on the off chance that he submits right certifications.

Writing space for the Problem:(For Student's use only)

Writing space for the Problem:(For Student's use only)

(For Evaluator's use only)

Comment of the Evaluator (if Any)

Evaluator's Observation

Marks Secured: _____ out of _____

Full Name of the Evaluator:

Signature of the Evaluator Date of Evaluation:

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JSP(JAVA SERVER PAGE)-2 #8

Date of the Session: ____/____/____

Time of the Session: ____ to ____

Prerequisite:

- Basic idea on Java Server pages and Action tags

Pre-Lab Task:

1. Write the Syntax for following Action tags:

a) <jsp : include>

b) <jsp : forward>

c) <jsp : param>

d) <jsp : usebean>

e) `<jsp : getproperty>`

f) `<jsp : setproperty>`

2) Explain about MVC Design pattern in JSP with a neat Diagram.

In Lab Task:

1. Develop an application which displays login form and login options such as login through Facebook (facebook.jsp) and login through Gmail (gmail.jsp) using JSP action tags like <jsp:include>, <jsp: forward>, Which takes input from first jsp and load the data AND Insert it into First JSP table, so that the user can login through the login.jsp next time.

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(Hint: Create an index.html file with username, password fields and different login options like login through Facebook, login through Gmail or simple login. For each type of login create a jsp file which checks whether given credentials are correct in that particular database.)

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Writing space for the Problem:(For Student's use only)

2. Develop an MVC application such that it takes 2 operands from text field and operator with the help of buttons. A controller must be used to transfer values and button response to model which performs actual Business logic and sends the result along with button response to the view to display the result accordingly.

Writing space for the Problem:(For Student's use only)

(Hint: create html file to read 2 operands and one operator value from buttons. Create controller.jsp to get both operands and operators. Forward them to model.jsp where operator is used on operands. Forward result and operand value to view.jsp to display final result.)

Writing space for the Problem:(For Student's use only)

Writing space for the Problem:(For Student's use only)

Post Lab Task:

1. ST. MARYS school Administrator is keen about the details of a student who is joining, so the students are requested to Fill the Name, Password, Email using index.html and develop a User.java file which is a bean class having setters and getters to set the values and using process.jsp which sets the incoming values to bean object and prints the values.

Writing space for the Problem:(For Student's use only)

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ENTERPRISE PROGRAMMING WORKBOOK

SESSION HANDLING#9

Date of the Session: ____/____/____

Time of the Session: ____to____

Prerequisite:

- Basic idea on Session handling techniques.

Pre-Lab Task:

1. What is session tracking? Why is session tracking used?
3. What are different types of session tracking techniques? Write few real-life examples for each session tracking technique.
4. Understand how a cookie works. Write syntax to create a cookie and store values, access and delete them.

In Lab Task:

1. Kamal needs to login to his Gmail account but he forgot his secret password. Create a login form where he enters his username and password. As password is wrong, show a message which says “Wrong Password” and forgot password link is shown. When user clicks it, use URL redirect method to display username entered in login form and change his password by displaying password field.

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2. Udemy is a site which gives online courses of various domains. This site chooses the cost of the course dependent on number of visits to the site from your account. If number of visits are more, cost is more. Discover number of times client tapped on any course from his account

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Post Lab Task:

1. Sharan needs to pay his college fee on the web. So, he opens online banking site and logs in with right accreditations. In the wake of signing in, show another structure which contains fields like username, college name, amount to be paid. After that, put username, school name and amount to be paid in session scope. Show a message "You are paying to 'college name' Rs. 'amount' " and a continue button. If client clicks continue, show a bill and end the session.

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Evaluator's Observation

Marks Secured:_____out of _____

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Signature of the Evaluator Date of Evaluation:

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
SUBJECT CODE: 17CS3116
ENTERPRISE PROGRAMMING WORKBOOK

HIBERNATE-1#10

Date of the Session: ____/____/____

Time of the Session: ____to____

Prerequisite:

- Basic idea on Hibernate

Pre-Lab Task:

1. What is ORM tool?
2. Disadvantages of JDBC/ Advantages of Hibernate/ Difference between the JDBC and Hibernate
3. Name the 4 layers of hibernate architecture

4. Write the syntax of mapping of xml and configuration of xml

In Lab Task:

1. Sreenivas, the proprietor of a rice mill, needs to keep up the information about the rice bags produced at his mill. He wants to save the cost, type of the rice (polished/ non-polished) and amount in kilograms for each bag. Write a hibernate application to insert the details of bags manufactured. The application should ask the user whether he wants to insert a details of a bag each time until he says 'no'. For every 'yes' it should gather the details of the bag i.e, the id number, amount, cost and type.

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2. Now Sreenivas, wants to sell a bag to a customer. he knows the id number of the bag and needs to retrieve the cost. Sreenivas doesn't encourage bargaining. So if the customer wants to buy the bag at the same value then he sells the bag and erases information about that bag. Write the hibernate application which asks the id number of the bag, displays the price of that bag, and then asks whether the customer wants to purchase the bag or not. If 'yes' then the details of the bag should be erased. (Note: Write only the java file with logic. While executing, implement the POJO, mapping, configuration files of previous question, since we are operating on same data)

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Post Lab Task:

1. Gokul Fabrics has wide range of various fabrics in different colours. The owner of the shop needs to keep up the information of the fabrics he have. He want to save the type, colour, available length and cost per metre for each fabric. He also wants to update the length of the fabric when he sells it to the customer.
 - a) Write a Hibernate application to insert the details of the fabric.
 - b) Write a Hibernate application which requests the id number of the fabric and its length sold, displays the total selling cost and then updates the data with the remaining length.

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HQL, HCQL #11

Date of the Session: ____/____/____

Time of the Session: ____to____

Prerequisite:

- Basic idea on Hibernate Query Language, Query Interface
- Basic idea on hibernate Criteria Query Language

Pre-Lab Task:

1. Write the HQL query to find the count of red colored bottles and of quantity 1 litre.
2. Write the HQL query to get data of the first 10 bottles which are microwave safe (i.e, the value of microwave safe is “yes”) in ascending order with respect to the quantity.
3. Write the HCQL query to get the 15th to 30th record.

4. Write the HCQL query to get the records who salary is greater than 150000.
5. Write the HCQL query to get the records in ascending order on the basis of salary.

In Lab Task:

1. Stoins is the manager of Minimal Cube company. He maintains the records of employees working in his company. Create a java class where he gets and sets the values of EmpID, EmpName, EmpSalary, EmpAddress. Use Hibernate Frame-work to reduce manual work. When employees are terminated he is likely to delete the record of employee in his database and update the data when it is required. After performing all the operations he is likely to know the employees working in his company at the end of every month, so retrieve the data those who are working in his company. Create separate java class for retrieving, updating and deleting so that the Mr. Stoins can easily work when an employee data needs to update, delete or retrieve. Use Concept of HCQL (Hibernate Criteria Query Language).

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Post Lab Task:

1. Mr. Deekshit is running an Online Shopping website where shopping take place in his website regularly. So he decided to maintain two different tables namely ORDER containing attributes like ID, ORDERDATE, ORDRENUMBER, CUSTOMERID, TOTALAMOUNT where ID is primary key and another table describing CUSTOMER (ID, FIRSTNAME, LASTNAME, CITY, COUNTRY, PHONE) where ID will not have a null value. By using JOINS through Hibernate Frame-work help Mr.Deekshit to know the details of customer and items customer purchased. Display Order-number, Total-amount, First-name, Last-name, City, Country using ORDER.ID and CUSTOMER.ID.

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INHERITANCE MAPPING #12

Date of the Session: ____/____/____

Time of the Session: ____ to ____

Prerequisite:

- Basic idea on Hibernate Framework

Pre-Lab Task:

1. What is Inheritance Mapping and List out Inheritance Mapping Hierarchy.
2. Explain each Type of Hierarchy.

In Lab Task:

1. A Bank Customer wants to try Inheritance through Table per class Hierarchy so he created a base class named Payment, containing attributes like paymentId, amount and two derived classes namely CreditCard consisting type of CreditCard they used and Cheque containing type of cheque. So, when the object of derived class is saved, object of base class will also get stored in the database in a single table. To know the Object of which class is stored we must use the Discriminator column. Apply Concept of Table per Class Hierarchy through Hibernate Frame Work.

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2. Mr. Robert Hiezman is a Manager at Company. Create a class where it gets and set the values like name and Id of employee. They hire different types of employees like regular employee who has salary, bonus they get and contract employee who has amount they earn per hour and time duration they work. Use Concept of Table per Concrete Class Hierarchy through Hibernate Framework and observe the Structure of data stored in the database.

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Post Lab Task:

1. From the Bank-Payment Scenario use the concept of table per subclass Hierarchy using Hibernate Framework and observe how it works and storing data in database.

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SPRING FRAMEWORK #13

Date of the Session: ____/____/____

Time of the Session: _____ to _____

Prerequisite:

- General idea on Spring Framework
- Modules of Spring Framework

Pre-Lab Task:

1. What is a spring?
2. Name some of the important spring Modules?
3. What are the tasks performed by IOC container?
4. How many types of IOC containers are there? Explain them?

In Lab Task:

1. Geetha is creating a website which displays the marks of student from two different java classes. So, define two different java beans and input attributes in Student.java like studentId, studentName and Marks.java which containing clear segregation of marks scored in each subject. Use Spring FrameWork to display all the details of each student to the browser.

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2. Mr.Deepak is very keen and interested to overcome Tightcoupling in java so he used Spring Framework with Dependency injection mechanism, he created a class traveler containing an interface vehicle and a method start journey calling a move method when a journey starts. He creates another two classes bike and car which implements the vehicle class, creates a object for vehicle when a journey starts. To know which vehicle is being used he is calling the method move with vehicle object so that the message will display which is present in implemented classes.

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Post Lab Task:

1. Ms.Varsha wants to develop an application using Spring Framework to display all the details of each employee to the browser. It displays the address of employee from two different java class, so define different java beans and input attributes in Employee.java like empId, empName and Address.java which contains clear address of each person.

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Time of the Session: _____ to _____

2. List out few advantages of Integration.

3. List out Methods of Hibernate-template class and write description about it.

In Lab Task:

1. The Navodaya Johar school is wanting to direct a get-together of their 2014-2015 batch students. To design this occasion and oversee, principal appointed a student from a similar batch. To do this the student needed to make hibernate application with spring application. He initially made a table in database to store the subtleties of his companions who are going to the gathering. He made the table with the name Reunion with properties ID No, Name, Contact Number, Amount paid, and Status. ID.NO being the primary key has the most extreme size of 4 digits and Status speaks to how much sum has been paid i.e; completely paid, or partially paid, or not paid. Note that the sum should be paid to go to the gathering is 2000 rupees. Now he needs to make a java project with springs and hibernate integration. Help him in Creating three unique classes for inserting subtleties in database. First make a class for inserting the details of the students who are going to the get-together gathering. Presently make another class for retrieving the amount paid by the students.

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Post Lab Task:

1. Now to the extension to the last question create a class file in the same java project for updating the database. If the student wants to pay the amount then update the amount in the database and print the total amount he paid till then and if he had paid the total amount then change the status to fully paid. If not then show the amount that needs to be paid by him. Also create a class file for deleting the details of students who cancelled their plan of going to get-together as a result of some issues.

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Time of the Session:_____to_____

2. Why do we use DAO?

3. What are the problems faced if data is accessed directly without objects?

4. write a short note on the participants in DAO pattern.

In Lab Task:

1. Revanth is a student who has a great startup plan but he wants students to work with him. So, students who are interested in startup can contact him. Revanth decided to conduct an interview for the interns and store the details who appeared (Name, ID, Mail, skills of every student) in the “student” table (Name varchar2(30), ID number, Mail varchar2(30), skills varchar2(100)). He Inserts all the details of people during interview and deletes the details people who are below par at the end of the day. So, by using “Data Access object” pattern create a student object which act as a model and create a concrete class and implement Data Access Object Interface and use a Democlass to access the insert, delete methods.

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Post Lab Task:

1. To continue with the previous problem, later some students approached Revanth to add some changes to their details and he also wants to display the people who are in list at the end of every day. So Revanth decided to add update and display methods to the DAO pattern.

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