MANGALORE UNIVERSITY

National Education Policy – 2020 [NEP-2020]

PRACTICAL LIST FOR

VI SEMESTER BCA

Program Name	**B.C.A**	Semester	**VI**
Course Title	**PHP and MySQL Lab**		
Course Code:	**DSC16-Lab**	No.of Credits	**02**
Contact hours	**4 Hours per week**	Duration of SEA/Exam	**3 hours**
Formative Assessment Marks	**25**	Summative Assessment Marks	**25**

PART-A

1. Create an HTML form with fields for user's name, email, and message. Write a PHP script to handle form data submission and display the submitted information.

Contact Form

Name:
No Name

Email:
noname@gmail.com

Message:
Welcome to PHP

Submit

Form Submission Result

Name: No Name

Email: noname@gmail.com

Message: Welcome to PHP

2. Write a PHP program that collects input from the user through a textbox and checks whether the given number is an Armstrong number or not.
   1. If the number is indeed an Armstrong number, display all numbers in range from 1 to that specified number (Note : 0 is Not an Armstrong Number).
   2. Perform text validation, including checks for positive integers and general text input.

Armstrong Number Checker

Enter a number: [153] [Check]

153 is an Armstrong number.

Armstrong numbers from 1 to 153 are: 1 2 3 4 5 6 7 8 9

Armstrong Number Checker

Enter a number: [100] [Check]

100 is not an Armstrong number.

Armstrong Number Checker

Enter a number: [TEXT INPUT] [Check]

Please enter a valid positive integer.

3. Write a PHP program demonstrating the usage of sessions to store and retrieve user credentials like username and password. Combine the login, welcome, and logout functionalities into two files –'index.php' and 'welcome.php'.

Login

Username: [   ]

Password: [   ]

[Login]

**Welcome user2**

This is a secure area. You're logged in.

Logout

4. Write a simple PHP program with a user interface for a mathematical calculator using HTML forms.
   Perform division by zero operation with appropriate display of messages.
   Perform text validation, special character validation for textboxes with appropriate display of messages

PHP Calculator

[Enter first number] [+ ▾] [Enter second number] [Calculate]

```
+
-
*
/
```
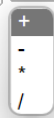
5. Write a PHP program with a user interface for calculating age based on the user's birth date. Display the age in years, months, and days

Age Calculator

Enter your birth date: [17-05-2004 📅] [Calculate Age]

Your age is 19 years, 9 months, and 8 days.

6. Write a PHP program to create an associative array representing a dictionary with words as keys and their meanings as values. Allow users to input a word and display

its meaning if found, otherwise, display a "Word not found" message. (Please keep 10 pairs of keys and their meanings)

Dictionary

Enter a word: [＿＿＿＿＿＿＿] [Search]

Meaning: A fruit that grows on trees.

Dictionary

Enter a word: [＿＿＿＿＿＿＿] [Search]

Word not found.

7. Write a PHP program that includes a user form with a text field and submit buttons for various string manipulations. It will display the result accordingly. (for replace, replace 'a' with 'x').

String Manipulation

Enter a string: [＿＿＿＿＿＿＿]

[Get Length] [Reverse] [Uppercase] [Lowercase] [Replace] [Check Palindrome] [Shuffle] [Word Count]
Shuffled string: niIda

8. Write a PHP user interface program with an HTML form to input a string. Upon submission, it will display the number of times each word occurs, ignoring the distinction between capital and lowercase letters. It should also print the most and least used words. Additionally, include buttons for sorting data in ascending order and descending order.

Word Frequency Analyzer

Enter a string: [a b b c c c d d d d] [Analyze]

Word Frequencies:

a: 1 times
b: 2 times
c: 3 times
d: 4 times

The most used word is: d (used 4 times)

The least used word is: a (used 1 times)

[Sort Ascending]
[Sort Descending]

Word Frequency Analyzer

Enter a string: [a b b c c c d d d d] [Analyze]

Word Frequencies:

d: 4 times
c: 3 times
b: 2 times
a: 1 times

The most used word is: d (used 4 times)

The least used word is: a (used 1 times)

[Sort Ascending]
[Sort Descending]

PART-B

1. PHP program to implement student registration form using Labels, Text Boxes, Text Area, Checkbox, Radio Buttons, Select and Submit button. (First Name, Last Name, Address, E-Mail, Mobile, City, State, Gender, Hobbies, Blood Group). Display user inserted value in a new PHP page in a neat format.

2. Develop a PHP program that facilitates the addition, multiplication of two matrices. Utilize HTML for the user interface and PHP for the backend logic. Dynamically generate the required number of textboxes based on the specified number of rows and columns. Implement three distinct buttons to perform each matrix operation For instance, consider the addition of two matrices as an example.

Matrix Addition

Enter the number of rows: 2

Enter the number of columns: 3

Matrix A

| 3 | 4 | 6 |
| 4 | 2 | -2 |

Matrix B

| 5 | 6 | 2 |
| 3 | 5 | 4 |

Add Matrices

Result Matrix

8	10	8
7	7	2

3. Write a PHP program that implements a class to add and find the difference of two distance values given in feet and inches. The user inputs are collected through an HTML form.

Distance Calculator

Distance 1:
Feet: 5
Inches: 8

Distance 2:
Feet: 3
Inches: 9

Calculate

Results:

Sum: 9' 5"

Difference: 5' 8"

4. Program to implement a login form where users enter their username and password. Validate the credentials against data stored in a MySQL database and grant access if they are correct.

5. Program to create a feedback form with fields for name, email, subject, and message. Store the submitted feedback data in a MySQL database for later review.

6. Develop a dynamic PHP application to efficiently manage and store customer information, encompassing key fields like Customer Number, Customer Name, Item Purchased, and Mobile Number in Database. This application should provide a user-friendly interface with strategically placed buttons to trigger specific functionalities. These functionalities include:
   1. Add Customer Information: Clicking this button should dynamically reveal a form for entering new customer details. Include proper validation checks for mobile numbers (10 digits), and also for Customer id ensuring accuracy in data input.
   2. Delete Customer Records: Triggering this button should prompt the appearance of a form, specifically requesting the Customer ID to identify and delete the corresponding customer record. And provide appropriate messages for incorrect inputs.
   3. Search for Particular Entries: This function should unveil a search form when activated, allowing users to input Customer id to find specific customer records.

4. Sort Database Based on Customer Id: Clicking this button should facilitate the sorting of the entire database based on customer id.
5. Display Complete Set of Records: Activating this function should present a comprehensive display of all customer records.
6. Interface Design: Initially, the interface should only showcase functional buttons. Upon clicking a button, the respective form should dynamically appear, offering a tailored and focused user experience.
7. Give proper messages after every transaction.

7. A PHP and MySQL programme that features a book shopping form that takes in the book number, book title, price, quantity, and a option to choose the book code. The bill with the discounted amount and net bill amount is then displayed. Additionally, bill data are stored in the table.
   Code Discount rate
   101 15%
   102 20%
   103 25%
   Any other 5%
   Find the discount amount and Net bill amount. Display the bill.

8. Develop a web application for proficiently managing hotel reservations, employing PHP for backend logic and MySQL for data storage. The application should feature a well-structured database table encompassing essential fields such as Room Number (primary key), Room Type (e.g., single semi, single deluxe, double semi, double deluxe, dormitory), Capacity, and Status (booked or available). Within the application's user interface, provide a textbox for entering the room number and two distinct buttons for check-in and check-out functionalities. Ensure that both check-in and check-out operations are executed based on the entered room number, facilitating a seamless and intuitive user experience

   A. Insert 5 records into the table through interface, reflecting both available and booked rooms.
   B. Lists all available rooms and booked rooms on the webpage.
   C. Change the booking status to "booked" when a user checks in.
   D. Change the room status to "available" when a user checks out.
   E. Displays appropriate messages for successful booking, check-out, or if the room number is not present or not in the expected status.

valuation Scheme for Lab Examination:

Assessment Criteria		
Program-1	PART-A Writing:4 Marks Execution:4Marks	8 Marks
Program-2	PART-B Writing:6 Marks Execution:6Marks	12 Marks
Practical Record		05 Marks
Total		25 Marks

Program Name	B.C.A	Semester	VI
Course Title	Advanced JAVA and J2EE		
Course Code:	DSC17-Lab	No.of Credits	02
Contact hours	4 Hours per week	Duration of SEA/Exam	3 hours
Formative Assessment Marks	25	Summative Assessment Marks	25

PART-A

1. Write a program to convert numbers into words using Enumerations with constructors, methods and instance variables.(INPUT RANGE-0 TO 99999) EX: 36 THIRTY SIX

2. Find the second maximum and second minimum in a set of numbers using auto boxing and unboxing.

3. Write a menu driven program to create an Arraylist and perform the following operations
   i)   Adding elements
   ii)   Sorting elements
   iii)   Replace an element with another
   iv)   Removing an element
   v)   Displaying all the elements
   vi)   Adding an element between two elements

4. Write a java program to find words with even number of characters in a string, then swap the pair of characters in those words and also toggle the characters in a given string

EX:

Good Morning everyone

Output: oGdo vereoyen

   gOOD mORNING EVERYONE

5. Write a Servlet program that accepts the age and name and displays if the user is eligible for voting or not

Output:

Name	Mayank
Age	23
	check voting eligibility

Mayank you are eligible to vote

Home

Name	Aditya
Age	15
	check voting eligibility

Aditya you are not eligible to vote

Home

6. Write a JSP program to print first 10 Fibonacci and 10 prime numbers.
7. Write a JSP Program to design a shopping cart to add items, remove item and to display items from the cart using Sessions

8. Write a java Servlet program to Download a file and display it on the screen(A link has to be provided in HTML, when the link is clicked corresponding file has to be displayed on screen).

PART-B

1. Write a menu driven JDBC program to perform basic operations with Student Table.

MENU
1. **Add new Student**
2. **Delete a specified students Record**
3. **Update Students Address specified students Record**
4. **Search for a particular Student**
5. **Exit**

Student

StRegNo	StName	Stdob	StAddress	StClass	StCourse

2. Write a menu driven JDBC program to perform basic operations with Bank Table.

MENU
1. **Add new Account Holder information.**
2. **Amount Deposit**
3. **Amount Withdrawal (Maintain minimum balance 500 Rs)**
4. **Display all information**
5. **Exit**

Bank

ACC_NO	ACC_NAME	ACC_ADDRESS	BALANCE

3. Write a Java class called Tax with methods for calculating Income Tax. Have this class as a servant and create a server program and register in the rmiregistry. Write a client program to invoke these remote methods of the servant and do the calculations. Accept inputs interactively.

< ₹ 3,00,000	No Tax
₹ 3,00,001 to ₹ 6,00,000	5%
₹ 6,00,001 to ₹ 9,00,000	10%
₹ 9,00,001 to ₹ 12,00,000	15%
₹ 12,00,001 to ₹ 15,00,000	20%
> ₹ 15,00,000	30%

4. Write a Java class called SimpleInterest with methods for calculating simple interest. Have this class as a servant and create a server program and register in the rmiregistry. Write a client program to invoke these remote methods of the servant and do the calculations. Accept inputs at command prompt.

5. Write a Servlet Program to perform Insert, update and View operations on Employee Table

Employee

Name	Password	Email	Country

Add New Employee

Name: Rahul Kumar
Password: •••••••••
Email: rahulkk@gmail.com
Country: India

Save Employee

view employees

Employees List

Id	Name	Password	Email	Country	Edit
63	Amit Kumar	amtkmjj45	amitkumar@gmail.com	India	edit
61	Rahul Kumar	rahul4000	rahulkk@gmail.com	India	edit
62	Sonoo Jaiswal	sonoobsk	sonoojaiswal1987@gmail.com	India	edit
44	adarsh kumar	kkkkk	adarsh232@gmail.com	India	edit

Update Employee

Name: Amit Kumar Rana
Password: •••••••••
Email: amitkumar12@gmail.com
Country: India

Edit & Save

6. Write a java JSP program to get student information through a HTML and create a JAVA Bean Class, populate Bean and Display the same information through another JSP

7. Write a menu driven program to create a linked list and perform the following operations.

   a. **to Insert some Elements at the Specified Position**

b. **swap two elements in a linked list**
c. **to Iterate a LinkedList in Reverse Order**
d. **to Compare Two LinkedList**
e. **to Convert a LinkedList to ArrayList**
8. Implement a java application based on the MVC design pattern.
Input student Rolnlo, name ,marks in three subject calculate result and grade and display the result in neat format.

Percentage of Marks	Grade
Above 90%	A
80% to 90%	B
70% to 80%	C
60% to 70%	D
Below 60%	E

Evaluation Scheme for Lab Examination:

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