Web Application Development Lab
Assignment – 8
PHP: Date Time, String, Array and OOP

1. Write a PHP Script to –
   a. Display Current Time
   b. Today's date
   c. Display the date in dd-mon-yyyy format(Ex: 06-Feb-2023)
   d. Display the date and time in Day, Date Month YYYY, hh:mm AM/PM format(Ex: Monday, 06 February 2023, 01:30 PM)

2. Consider the string "PHP stands for PHP : Hypertext Preprocessor" and write a PHP script to perform the following operation –
   a. Display the length of the string
   b. Convert the string to all upper-case
   c. Find the maximum and minimum length words with their corresponding length
   d. The array constructed in the previous question (c) construct a string "PHP-stands-for-PHP-:-Hypertext-Preprocessor"
   e. In the original string find the location of "PHP"
   f. Replace "PHP" with "XYZ"

3. Construct a numeric array with a minimum of 10 numbers and perform the following operation – (Use loops only to perform any display operation of the array)
   a. Find the number of elements present in the array
   b. Find the largest and smallest number
   c. Reverse the array and display it
   d. Sort the array and display it
   e. Sort the array in reverse order and display it.
   f. Search if 10 is present in the array or not. If present display the index.

4. Construct the following associative array (name and their respective salary) and perform the following operation –
   ("Tom"=>25000, "Jerry"=>37000, "Spike"=>32000, "Casper"=>50000, "Droopy"=>45000, "Mickey"=>42000)

a. Display all the employee details in an unordered list in the format – "Salary of Tom is 25000"

b. Display only the Employee names

c. Find the total amount of salary to be paid to these employees

d. Sort and display the employee details in alphabetical order

e. Sort the employees based on salary and display them

f. Find the employee name who gets the highest salary

g. In a tabular format display Name, Yearly Salary, Tax %, and Tax Amount. If an employee's yearly salary exceeds 420000, then he/she has to pay 5% tax, or else the tax is 3.5%.

5. Consider the following associative array (id=>details) and perform the operations asked below.

```
$products => array (
    'product1' => array ('name' => 'Laptop', 'price' => 800, 'stock' => 15),
    'product2' => array ('name' => 'Smartphone', 'price' => 400, 'stock' => 20),
    'product3' => array ('name' => 'Headphones', 'price' => 50, 'stock' => 50),
)
```

i. Display the price of product2

ii. Check if "product3" is in stock (i.e., stock is greater than 0). If it is, echo "In stock," otherwise echo "Out of stock."

iii. Calculate the average price of all the products

iv. Display all the product details after applying 10% discount to all the products, in a table format having columns – ProductID, Name, Price, Stock, and Discounted Price. Use bootstrap classes to style the table.

6. Write a PHP program to define a class Employee with data members empId, empName, and designation. Define a constructor to initialize the members of the class. The class should also have a method to display the employee details. Read and display the details of 3 employees.

7. Develop a PHP program that deals with employee information of an organization. Define a class Employee having the following members:

a. Data members: empName, empNo, basicSal, da, hra, grossSal

b. Member function: calGrossSal(), showEmpDetails()

c. Define a parameterized constructor to initialize empName, empNo, and basicSal. Create any two objects of the Employee class and initialize their data members during object creation. Use the

method calGrossSal() to calculate the gross salary and the method showEmpDetails() to display the detailed information of the employees. Note that DA is 20% of basicSal, HRA is 10% of basicSal and grossSal is the sum of basicSal, DA and HRA.

8. Design a class Complex having data members real and img. The class should have a parameterized constructor to initialize its data members. It should also have methods display() to display the complex number (in the format 5+3i for example). Create two objects of the class to initialize two complex numbers and perform addition, subtraction, and multiplication of the same.

9. Create a PHP class Person with attributes: name and age of type string. Create a display() method that displays the name and age of an object created via the Person class. Create a child class Student that inherits from the Person class and has roll number, branch, and section as attributes. Create a method displayStudent() that displays the name, roll, age, branch, and section of an object created via the Student class. Create a student object via an instantiation on the Student class and then test the displayStudent method.

10. Write a PHP script to simulate the credit card transaction. If any information is not given throw an exception with message to provide data for all the 4 variables (mentioned below). Implement custom exceptions for cases where the transaction fails, either due to invalid card details (card number length less than 16), card expired, or insufficient funds. Store card_number, card_exp_date, account_balance, and transaction_amount in variables and use try-catch blocks to manage these exceptions and log relevant information.