1) Leap Year

```java
public class LeapYearService {

    public String checkLeapYear(int year) {

        if ((year % 400 == 0) || (year % 4 == 0 && year % 100 != 0)) {

            return year + " is a Leap Year";

        } else {

            return year + " is not a Leap Year";

        }

    }

}
```

Client Side

```java
public class TestClient {

    public static void main(String[] args) throws Exception {

        java.net.URL endpointUrl = new java.net.URL(

            "http://localhost:8080/LeapYearService/services/LeapYearService"

        );


        org.apache.axis.client.Service service = new org.apache.axis.client.Service();

        LeapYearServiceSoapBindingStub stub = new
LeapYearServiceSoapBindingStub(endpointUrl, service);


        String result = stub.checkLeapYear(2024);

        System.out.println(result);

    }

}
```

2) total marks, average, display the class

```java
public class StudentResultService {

    public String calculateResult(int sub1, int sub2, int sub3) {

        int total = sub1 + sub2 + sub3;
```

```java
        double average = total / 3.0;
        String grade;

        if (average >= 75) {
            grade = "Distinction";
        } else if (average >= 60) {
            grade = "First Class";
        } else if (average >= 50) {
            grade = "Second Class";
        } else if (average >= 35) {
            grade = "Pass Class";
        } else {
            grade = "Fail";
        }

        return "Total Marks: " + total + ", Average: " + average + ", Class: " + grade;
    }
}
```

3) **Perfect number**

```java
public class PerfectNumberService {
    public String checkPerfectNumber(int num) {
        int sum = 0;
        for (int i = 1; i <= num / 2; i++) {
            if (num % i == 0) {
                sum += i;
            }
        }

        if (sum == num) {
```

```java
            return num + " is a Perfect Number";
        } else {
            return num + " is not a Perfect Number";
        }
    }
}
```

Prime Number

```java
public class PrimeNumberService {
    public String checkPrime(int num) {
        if (num <= 1)
            return num + " is not a Prime Number";


        for (int i = 2; i <= num / 2; i++) {
            if (num % i == 0)
                return num + " is not a Prime Number";
        }
        return num + " is a Prime Number";
    }
}
```

Reverse

```java
public class ReverseNumberService {
    public int findReverse(int num) {
        int reverse = 0;
        while (num != 0) {
            int digit = num % 10;
            reverse = reverse * 10 + digit;
            num /= 10;
```

```java
        }
        return reverse;
    }
}
```

Vowel count

```java
public class VowelCountService {
    public int countVowels(String input) {
        int count = 0;

        for (int i = 0; i < input.length(); i++) {
            char ch = input.charAt(i);
            if (ch == 'a' || ch == 'e' || ch == 'i' || ch == 'o' || ch == 'u') {
                count++;
            }
        }
        return count;
    }
}
```

Palindrome

```java
public class PalindromeService {
    public String checkPalindrome(int num) {
        int original = num;
        int reverse = 0;

        while (num != 0) {
            int digit = num % 10;
```

```java
            reverse = reverse * 10 + digit;

            num /= 10;

        }


        if (original == reverse) {

            return original + " is a Palindrome Number";

        } else {

            return original + " is not a Palindrome Number";

        }

    }

}
```

Armstrong number

```java
public class ArmstrongService {

    public String checkArmstrong(int num) {

        int n = num, sum = 0;

        while (n > 0) {

            int digit = n % 10;

            sum = sum + (digit * digit * digit);

            n = n / 10;

        }

        if (sum == num)

            return num + " is an Armstrong number";

        else

            return num + " is not an Armstrong number";

    }

}
```

Binary, octal, hexadecimal

```java
public class ConversionService {
```

```java
    public String convertToBinary(int num) {

        return "Binary: " + Integer.toBinaryString(num);

    }


    public String convertToOctal(int num) {

        return "Octal: " + Integer.toOctalString(num);

    }


    public String convertToHexadecimal(int num) {

        return "Hexadecimal: " + Integer.toHexString(num).toUpperCase();

    }
}
```

Greet according to time

```java
import java.util.Calendar;


public class GreetService {
    public String greetUser(String name) {
        int hour = Calendar.getInstance().get(Calendar.HOUR_OF_DAY);
        String greet;


        if (hour < 12)
            greet = "Good Morning";
        else if (hour < 18)
            greet = "Good Afternoon";
        else
            greet = "Good Evening";


        return greet + ", " + name + "!";
    }
```

```
}
```

Celsius to farhenheit

```
public class TemperatureService {

    public double celsiusToFahrenheit(double celsius) {

        return (celsius * 9 / 5) + 32;

    }

}
```

Email regex validate

```
import java.util.regex.*;

public class EmailValidationService {

    public String validateEmail(String email) {

        String regex = "^[A-Za-z0-9+_.-]+@(.+)$";

        Pattern pattern = Pattern.compile(regex);

        Matcher matcher = pattern.matcher(email);

        if (matcher.matches())

            return email + " is a valid email address.";

        else

            return email + " is not a valid email address.";

    }

}
```

Mobile number validate

```
import java.util.regex.*;

public class MobileValidationService {

    public String validateMobile(String mobile) {

        String regex = "^[0-9]{10}$";

        Pattern pattern = Pattern.compile(regex);
```

```java
        Matcher matcher = pattern.matcher(mobile);


        if (matcher.matches())
            return mobile + " is a valid mobile number.";
        else
            return mobile + " is not a valid mobile number.";
    }
}
```

Dollar pound rupee

```java
public class CurrencyConversionService {
    public double rupeesToDollar(double rupees) {
        return rupees / 83.0;   // Approximate conversion rate
    }


    public double rupeesToPound(double rupees) {
        return rupees / 100.0;  // Approximate conversion rate
    }


    public double rupeesToEuro(double rupees) {
        return rupees / 90.0;   // Approximate conversion rate
    }
}
```

Keyword Suggestion

```java
import java.util.*;

public class SuggestionService {
    public String[] getSuggestions(String keyword) {
        List<String> suggestions = new ArrayList<String>();
```

```java
        keyword = keyword.toLowerCase();

        if (keyword.startsWith("java")) {
            suggestions.add("Java Programming");
            suggestions.add("Java Web Services");
            suggestions.add("Java Spring Boot");
        } else if (keyword.startsWith("python")) {
            suggestions.add("Python Basics");
            suggestions.add("Python Data Science");
            suggestions.add("Python Machine Learning");
        } else if (keyword.startsWith("web")) {
            suggestions.add("Web Development");
            suggestions.add("Web Services");
            suggestions.add("Web Security");
        } else {
            suggestions.add("No suggestions found for: " + keyword);
        }

        return suggestions.toArray(new String[0]);
    }
}
```

Client side

```java
    String[] result = stub.getSuggestions("java");

    System.out.println("Suggestions:");
    for (String s : result) {
        System.out.println("- " + s);
```

Send student number and display details

```java
import java.sql.*;

public class StudentDatabasePHP {
    public String displayStudent(int sid) {
        String result = "";
        Connection con = null;
        PreparedStatement ps = null;
        ResultSet rs = null;

        try {
            // Oracle DB Connection
            Class.forName("oracle.jdbc.driver.OracleDriver");
            con = DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe",
"system", "system");

            String query = "SELECT sno, sname, sclass, sper FROM student WHERE sno = ?";
            ps = con.prepareStatement(query);
            ps.setInt(1, sid);
            rs = ps.executeQuery();

            if (rs.next()) {
                result = "SNo: " + rs.getInt("sno") +
                        ", Name: " + rs.getString("sname") +
                        ", Class: " + rs.getString("sclass") +
                        ", Percentage: " + rs.getFloat("sper");
            } else {
                result = "No student found with ID " + sid;
            }
        } catch (Exception e) {
```

```java
            result = "Error: " + e.getMessage();

        } finally {

            try { if (rs != null) rs.close(); } catch (Exception e) {}

            try { if (ps != null) ps.close(); } catch (Exception e) {}

            try { if (con != null) con.close(); } catch (Exception e) {}

        }

        return result;

    }

}
```

Client side

```html
<html>

<head>

<title>WS for PHP-JAVA Connection</title>

</head>

<body bgcolor="yellow">

<center>

<br><br>

<font size=30 color=red>Web Services for PHP-JAVA Connection</font><br><br>


<font size=30 color=magenta>Search Student in Java-Oracle Database from
PHP</font><br><br>


<form method="post" action="StudentDatabasePHP.php">

<font size=10 color=blue>

Enter student Id <input type="text" name="a"><br><br>

<input type="submit" value="Display" name="Display">

</font>

</form>

</center>

</body>

</html>
```

```php
<?php
if (isset($_POST["Display"])) {
    require_once("C:/wamp/www/PHP WS Client/nusoap-0.9.5/lib/nusoap.php");
    $wsdl = "http://localhost:8081/StudentDatabasePHP/services/StudentDatabasePHP?wsdl";


    try {
        $client = new nusoap_client($wsdl, 'wsdl');
        $a = $_POST['a'];
        $params = array('sid' => (int)$a);
        $response = $client->call('displayStudent', $params);


        echo "<center><font size=6 color=blue>";
        if (is_array($response)) {
            echo "Student No: " . $response[0] . "<br>";
            echo "Name: " . $response[1] . "<br>";
            echo "Class: " . $response[2] . "<br>";
            echo "Percentage: " . $response[3] . "<br>";
        } else {
            echo $response;
        }
        echo "</font></center>";
    } catch (Exception $e) {
        echo "In SOAP Fault: " . $e->getMessage();
    }
}
?>
```

Employee details
Server side

```java
import java.sql.*;
```

```java
public class EmployeeDatabasePHP {
    public String displayEmployee(String ename) {
        String result = "";
        Connection con = null;
        PreparedStatement ps = null;
        ResultSet rs = null;

        try {
            // Oracle DB Connection
            Class.forName("oracle.jdbc.driver.OracleDriver");
            con = DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe", "system", "yourpassword");

            String query = "SELECT eno, ename, designation, salary FROM employee WHERE LOWER(ename) = LOWER(?)";
            ps = con.prepareStatement(query);
            ps.setString(1, ename);
            rs = ps.executeQuery();

            if (rs.next()) {
                result = "Employee No: " + rs.getInt("eno") +
                    ", Name: " + rs.getString("ename") +
                    ", Designation: " + rs.getString("designation") +
                    ", Salary: " + rs.getDouble("salary");
            } else {
                result = "No employee found with name " + ename;
            }
        } catch (Exception e) {
            result = "Error: " + e.getMessage();
        } finally {
```

```
            try { if (rs != null) rs.close(); } catch (Exception e) {}

            try { if (ps != null) ps.close(); } catch (Exception e) {}

            try { if (con != null) con.close(); } catch (Exception e) {}

        }

        return result;

    }

}
```

Client side

```html
<html>

<head>

<title>WS for PHP-JAVA Connection</title>

</head>

<body bgcolor="yellow">

<center>

<br><br>

<font size=30 color=red>Web Services for PHP-JAVA Connection</font><br><br>


<font size=30 color=magenta>Search Employee in Java-Oracle Database from PHP</font><br><br>


<form method="post" action="EmployeeDatabasePHP.php">

<font size=10 color=blue>

Enter Employee Name <input type="text" name="ename"><br><br>

<input type="submit" value="Display" name="Display">

</font>

</form>

</center>

</body>

</html>


<?php
```

```php
if (isset($_POST["Display"])) {
    require_once("C:/wamp/www/PHP WS Client/nusoap-0.9.5/lib/nusoap.php");
    $wsdl =
"http://localhost:8081/EmployeeDatabasePHP/services/EmployeeDatabasePHP?wsdl";

    try {
        $client = new nusoap_client($wsdl, 'wsdl');
        $ename = $_POST['ename'];
        $params = array('ename' => $ename);
        $response = $client->call('displayEmployee', $params);

        echo "<center><font size=6 color=blue>";
        if (is_array($response)) {
            echo "Employee No: " . $response[0] . "<br>";
            echo "Name: " . $response[1] . "<br>";
            echo "Designation: " . $response[2] . "<br>";
            echo "Salary: " . $response[3] . "<br>";
        } else {
            echo $response;
        }
        echo "</font></center>";
    } catch (Exception $e) {
        echo "In SOAP Fault: " . $e->getMessage();
    }
}
?>
```

Database validation

```java
import java.sql.*;

public class LoginValidation {
```

```java
public String validateUser(String uname, String pass) {

    String result = "";

    Connection con = null;

    PreparedStatement ps = null;

    ResultSet rs = null;


    try {

        // Load Oracle JDBC Driver

        Class.forName("oracle.jdbc.driver.OracleDriver");

        con = DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:XE",
"system", "admin");


        // Query to check username and password

        ps = con.prepareStatement("SELECT * FROM users WHERE username=? AND
password=?");

        ps.setString(1, uname);

        ps.setString(2, pass);

        rs = ps.executeQuery();


        if (rs.next()) {

            result = "Login Successful! Welcome, " + uname + ".";

        } else {

            result = "Invalid Username or Password!";

        }

    } catch (Exception e) {

        result = "Error: " + e.getMessage();

    } finally {

        try { if (rs != null) rs.close(); } catch (Exception e) {}

        try { if (ps != null) ps.close(); } catch (Exception e) {}

        try { if (con != null) con.close(); } catch (Exception e) {}

    }
```

```
    return result;

  }

}
```

Client Side (PHP + NuSOAP):

```html
<html>
<head>
<title>WS for PHP-JAVA Connection</title>
</head>
<body bgcolor="yellow">
<center>
<br><br>
<font size=30 color=red>Web Services for PHP-JAVA Connection</font><br><br>


<font size=30 color=magenta>Login Validation in Java-Oracle Database from PHP</font><br><br>


<form method="post" action="LoginValidationPHP.php">
<font size=10 color=blue>
Username: <input type="text" name="uname"><br><br>
Password: <input type="password" name="pass"><br><br>
<input type="submit" value="Login" name="Login">
</font>
</form>
</center>
</body>
</html>


<?php
if (isset($_POST["Login"])) {
  require_once("C:/wamp/www/PHP WS Client/nusoap-0.9.5/lib/nusoap.php");
  $wsdl = "http://localhost:8081/LoginValidation/services/LoginValidation?wsdl";
```

```php
    try {

        $client = new nusoap_client($wsdl, 'wsdl');

        $uname = $_POST['uname'];

        $pass = $_POST['pass'];

        $params = array('uname' => $uname, 'pass' => $pass);

        $response = $client->call('validateUser', $params);


        echo "<center><font size=6 color=blue>";

        echo $response;

        echo "</font></center>";

    } catch (Exception $e) {

        echo "In SOAP Fault: " . $e->getMessage();

    }

}
?>
```

Student details delete

```java
import java.sql.*;

import java.util.ArrayList;


public class StudentDeleteService {

    public String deleteAndShowStudents(int sno) {

        String result = "";

        Connection con = null;

        PreparedStatement ps = null;

        Statement st = null;

        ResultSet rs = null;


        try {
```

```java
Class.forName("oracle.jdbc.driver.OracleDriver");
con = DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:XE", "system", "admin");


// Delete the student with given number
ps = con.prepareStatement("DELETE FROM student WHERE sno=?");
ps.setInt(1, sno);
int rows = ps.executeUpdate();


if (rows > 0) {
    result = "Student deleted successfully.<br><br>";
} else {
    result = "No student found with number: " + sno + "<br><br>";
}


// Fetch updated student list
st = con.createStatement();
rs = st.executeQuery("SELECT * FROM student");


result += "<table border='1' cellpadding='8' style='border-collapse: collapse;'>";
result += "<tr><th>S.No</th><th>Name</th><th>Class</th><th>Percentage</th></tr>";


while (rs.next()) {
    result += "<tr><td>" + rs.getInt("sno") + "</td><td>" +
            rs.getString("sname") + "</td><td>" +
            rs.getString("sclass") + "</td><td>" +
            rs.getFloat("sper") + "</td></tr>";
}
result += "</table>";
} catch (Exception e) {
```

```java
            result = "Error: " + e.getMessage();

        } finally {

            try { if (rs != null) rs.close(); } catch (Exception e) {}

            try { if (ps != null) ps.close(); } catch (Exception e) {}

            try { if (st != null) st.close(); } catch (Exception e) {}

            try { if (con != null) con.close(); } catch (Exception e) {}

        }

        return result;

    }

}
```

Client Side (PHP + NuSOAP)

```html
<html>

<head>

<title>WS for PHP-JAVA Connection</title>

</head>

<body bgcolor="yellow">

<center>

<br><br>

<font size=30 color=red>Web Services for PHP-JAVA Connection</font><br><br>


<font size=30 color=magenta>Delete Student in Java-Oracle Database from PHP</font><br><br>


<form method="post" action="StudentDeletePHP.php">

<font size=10 color=blue>

Enter Student No <input type="text" name="sno"><br><br>

<input type="submit" value="Delete & Display" name="Delete">

</font>

</form>

</center>

</body>
```

</html>

```php
<?php
if (isset($_POST["Delete"])) {
    require_once("C:/wamp/www/PHP WS Client/nusoap-0.9.5/lib/nusoap.php");
    $wsdl = "http://localhost:8081/StudentDeletePHP/services/StudentDeleteService?wsdl";

    try {
        $client = new nusoap_client($wsdl, 'wsdl');
        $sno = $_POST['sno'];
        $params = array('sno' => (int)$sno);
        $response = $client->call('deleteAndShowStudents', $params);
        echo "<center><font size=5 color=blue>";
        echo $response;
        echo "</font></center>";
    } catch (Exception $e) {
        echo "In SOAP Fault: " . $e->getMessage();
    }
}
?>
```

Student update

```java
import java.sql.*;

public class StudentUpdateService {
    public String updateAndShowStudents(int sno, String newName) {
        String result = "";
        Connection con = null;
        PreparedStatement ps = null;
        Statement st = null;
        ResultSet rs = null;
```

```java
try {
    Class.forName("oracle.jdbc.driver.OracleDriver");
    con = DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:XE",
"system", "admin");

    // Update student name
    ps = con.prepareStatement("UPDATE student SET sname=? WHERE sno=?");
    ps.setString(1, newName);
    ps.setInt(2, sno);
    int rows = ps.executeUpdate();

    if (rows > 0) {
        result = "Student name updated successfully.<br><br>";
    } else {
        result = "No student found with number: " + sno + "<br><br>";
    }

    // Fetch updated student list
    st = con.createStatement();
    rs = st.executeQuery("SELECT * FROM student");

    result += "<table border='1' cellpadding='8' style='border-collapse: collapse;'>";
    result +=
"<tr><th>S.No</th><th>Name</th><th>Class</th><th>Percentage</th></tr>";

    while (rs.next()) {
        result += "<tr><td>" + rs.getInt("sno") + "</td><td>" +
                rs.getString("sname") + "</td><td>" +
                rs.getString("sclass") + "</td><td>" +
                rs.getFloat("sper") + "</td></tr>";
```

```
        }

        result += "</table>";

    } catch (Exception e) {

        result = "Error: " + e.getMessage();

    } finally {

        try { if (rs != null) rs.close(); } catch (Exception e) {}

        try { if (ps != null) ps.close(); } catch (Exception e) {}

        try { if (st != null) st.close(); } catch (Exception e) {}

        try { if (con != null) con.close(); } catch (Exception e) {}

    }

    return result;

  }

}
```

Client Side (PHP)

```
<html>

<head>

<title>WS for PHP-JAVA Connection</title>

</head>

<body bgcolor="yellow">

<center>

<br><br>

<font size=30 color=red>Web Services for PHP-JAVA Connection</font><br><br>


<font size=30 color=magenta>Update Student in Java-Oracle Database from
PHP</font><br><br>


<form method="post" action="StudentUpdatePHP.php">

<font size=10 color=blue>

Enter Student No <input type="text" name="sno"><br><br>

Enter New Name <input type="text" name="newName"><br><br>

<input type="submit" value="Update & Display" name="Update">
```

```
</font>

</form>

</center>

</body>

</html>


<?php
if (isset($_POST["Update"])) {

    require_once("C:/wamp/www/PHP WS Client/nusoap-0.9.5/lib/nusoap.php");

    $wsdl = "http://localhost:8081/StudentUpdatePHP/services/StudentUpdateService?wsdl";


    try {

        $client = new nusoap_client($wsdl, 'wsdl');

        $sno = $_POST['sno'];

        $newName = $_POST['newName'];

        $params = array('sno' => (int)$sno, 'newName' => $newName);

        $response = $client->call('updateAndShowStudents', $params);


        echo "<center><font size=5 color=blue>";

        echo $response;

        echo "</font></center>";

    } catch (Exception $e) {

        echo "In SOAP Fault: " . $e->getMessage();

    }

}
?>
```

Student insert

```
import java.sql.*;

import java.util.*;
```

```java
public class StudentInsertService {

    public String insertStudent(int sno, String sname, String sclass, float sper) {
        Connection con = null;
        Statement st = null;
        ResultSet rs = null;
        String result = "";

        try {
            Class.forName("oracle.jdbc.driver.OracleDriver");
            con = DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe",
"system", "admin");
            st = con.createStatement();

            int count = st.executeUpdate("INSERT INTO student VALUES(" + sno + ", '" +
sname + "', '" + sclass + "', " + sper + ")");

            if (count > 0) {
                result += "Record Inserted Successfully<br><br>Updated Student Details:<br>";
                rs = st.executeQuery("SELECT * FROM student");
                while (rs.next()) {
                    result += "Sno: " + rs.getInt(1) + ", Name: " + rs.getString(2) + ", Class: " +
rs.getString(3) + ", Percentage: " + rs.getFloat(4) + "<br>";
                }
            } else {
                result = "Insertion Failed!";
            }
        } catch (Exception e) {
            result = "Error: " + e.getMessage();
        } finally {
```

```
        try {
            if (rs != null) rs.close();

            if (st != null) st.close();

            if (con != null) con.close();

        } catch (Exception ignored) {}

    }


    return result;

    }

}
```

Client side

```html
<html>

<head>

<title>Insert Student Record</title>

</head>

<body bgcolor="lightyellow">

<center>

<br><br>

<font size=6 color=red>Insert New Student Record via Java Web Service</font><br><br>


<form method="post" action="StudentInsertClient.php">

<font size=5 color=blue>

Student No: <input type="text" name="sno"><br><br>

Student Name: <input type="text" name="sname"><br><br>

Student Class: <input type="text" name="sclass"><br><br>

Percentage: <input type="text" name="sper"><br><br>

<input type="submit" value="Insert Record" name="Insert">

</font>

</form>

</center>
```

```
</body>

</html>


<?php

if (isset($_POST["Insert"])) {

    require_once("C:/wamp/www/PHP WS Client/nusoap-0.9.5/lib/nusoap.php");

    $wsdl = "http://localhost:8081/StudentInsertService/services/StudentInsertService?wsdl";

    try {

        $client = new nusoap_client($wsdl, 'wsdl');

        $params = array(

            'sno' => (int)$_POST['sno'],

            'sname' => $_POST['sname'],

            'sclass' => $_POST['sclass'],

            'sper' => (float)$_POST['sper']

        );

        $response = $client->call('insertStudent', $params);

        echo "<center><font size=5 color=green>$response</font></center>";

    } catch (Exception $e) {

        echo "SOAP Fault: " . $e->getMessage();

    }

}

?>
```

Movie Database

```java
import java.sql.*;


public class MovieDatabasePHP {

    public String displayMoviesByActor(String aname) {

        String result = "";

        Connection con = null;

        PreparedStatement ps = null;
```

```java
ResultSet rs = null;

try {
    // Oracle DB Connection
    Class.forName("oracle.jdbc.driver.OracleDriver");
    con = DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe", "system", "yourpassword");

    String query = "SELECT m.mno, m.mname, m.release_year, a.aname " +
            "FROM movie m INNER JOIN actor a ON m.ano = a.ano " +
            "WHERE LOWER(a.aname) = LOWER(?)";

    ps = con.prepareStatement(query);
    ps.setString(1, aname);
    rs = ps.executeQuery();

    StringBuilder sb = new StringBuilder();
    while (rs.next()) {
        sb.append("Movie No: ").append(rs.getInt("mno"))
          .append(", Movie Name: ").append(rs.getString("mname"))
          .append(", Release Year: ").append(rs.getInt("release_year"))
          .append(", Actor: ").append(rs.getString("aname"))
          .append("<br>");
    }

    if (sb.length() == 0) {
        result = "No movies found for actor: " + aname;
    } else {
        result = sb.toString();
    }
```

```
        } catch (Exception e) {

            result = "Error: " + e.getMessage();

        } finally {

            try { if (rs != null) rs.close(); } catch (Exception e) {}

            try { if (ps != null) ps.close(); } catch (Exception e) {}

            try { if (con != null) con.close(); } catch (Exception e) {}

        }


        return result;

    }
}
```

Client Side

```
<html>

<head>

<title>WS for PHP-JAVA Connection</title>

</head>

<body bgcolor="yellow">

<center>

<br><br>

<font size=30 color=red>Web Services for PHP-JAVA Connection</font><br><br>


<font size=30 color=magenta>Search Movies by Actor in Java-Oracle Database from PHP</font><br><br>


<form method="post" action="MovieDatabasePHP.php">

<font size=10 color=blue>

Enter Actor Name <input type="text" name="aname"><br><br>

<input type="submit" value="Display Movies" name="Display">

</font>

</form>

</center>
```

```
</body>

</html>


<?php

if (isset($_POST["Display"])) {

    require_once("C:/wamp/www/PHP WS Client/nusoap-0.9.5/lib/nusoap.php");

    $wsdl = "http://localhost:8081/MovieDatabasePHP/services/MovieDatabasePHP?wsdl";


    try {

        $client = new nusoap_client($wsdl, 'wsdl');

        $aname = $_POST['aname'];

        $params = array('aname' => $aname);

        $response = $client->call('displayMoviesByActor', $params);


        echo "<center><font size=6 color=blue>";

        echo $response;

        echo "</font></center>";

    } catch (Exception $e) {

        echo "In SOAP Fault: " . $e->getMessage();

    }

}

?>
```

Student course database

```
import java.sql.*;


public class CourseStudentDatabasePHP {

    public String displayStudentsByCourse(String cname) {

        String result = "";

        Connection con = null;
```

```java
PreparedStatement ps = null;
ResultSet rs = null;

try {
    // Oracle DB Connection
    Class.forName("oracle.jdbc.driver.OracleDriver");
    con = DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe", "system", "yourpassword");

    String query = "SELECT s.sno, s.sname, c.cname, c.duration " +
            "FROM student s INNER JOIN course c ON s.cno = c.cno " +
            "WHERE LOWER(c.cname) = LOWER(?)";

    ps = con.prepareStatement(query);
    ps.setString(1, cname);
    rs = ps.executeQuery();

    StringBuilder sb = new StringBuilder();
    while (rs.next()) {
        sb.append("Student No: ").append(rs.getInt("sno"))
          .append(", Name: ").append(rs.getString("sname"))
          .append(", Course: ").append(rs.getString("cname"))
          .append(", Duration: ").append(rs.getString("duration"))
          .append("<br>");
    }

    if (sb.length() == 0) {
        result = "No students found for course: " + cname;
    } else {
        result = sb.toString();
    }
```

```java
        } catch (Exception e) {

            result = "Error: " + e.getMessage();

        } finally {

            try { if (rs != null) rs.close(); } catch (Exception e) {}

            try { if (ps != null) ps.close(); } catch (Exception e) {}

            try { if (con != null) con.close(); } catch (Exception e) {}

        }


        return result;

    }

}
```

Client side

```html
<html>

<head>

<title>WS for PHP-JAVA Connection</title>

</head>

<body bgcolor="yellow">

<center>

<br><br>

<font size=30 color=red>Web Services for PHP-JAVA Connection</font><br><br>


<font size=30 color=magenta>Search Students by Course in Java-Oracle Database from PHP</font><br><br>


<form method="post" action="CourseStudentDatabasePHP.php">

<font size=10 color=blue>

Enter Course Name <input type="text" name="cname"><br><br>

<input type="submit" value="Display Students" name="Display">

</font>

</form>
```

```
</center>

</body>

</html>


<?php

if (isset($_POST["Display"])) {

    require_once("C:/wamp/www/PHP WS Client/nusoap-0.9.5/lib/nusoap.php");

    $wsdl =
"http://localhost:8081/CourseStudentDatabasePHP/services/CourseStudentDatabasePHP?wsd
l";


    try {

        $client = new nusoap_client($wsdl, 'wsdl');

        $cname = $_POST['cname'];

        $params = array('cname' => $cname);

        $response = $client->call('displayStudentsByCourse', $params);


        echo "<center><font size=6 color=blue>";

        echo $response;

        echo "</font></center>";

    } catch (Exception $e) {

        echo "In SOAP Fault: " . $e->getMessage();

    }

}

?>
```

Book Author Database

```java
import java.sql.*;


public class AuthorBookDatabasePHP {

    public String displayBooksByAuthor(String aname) {
```

```java
String result = "";
Connection con = null;
PreparedStatement ps = null;
ResultSet rs = null;


try {
    // Oracle DB Connection
    Class.forName("oracle.jdbc.driver.OracleDriver");
    con = DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe",
"system", "yourpassword");


    String query = "SELECT b.bno, b.bname, b.price, a.aname " +
            "FROM book b INNER JOIN author a ON b.ano = a.ano " +
            "WHERE LOWER(a.aname) = LOWER(?)";


    ps = con.prepareStatement(query);
    ps.setString(1, aname);
    rs = ps.executeQuery();


    StringBuilder sb = new StringBuilder();
    while (rs.next()) {
        sb.append("Book No: ").append(rs.getInt("bno"))
          .append(", Book Name: ").append(rs.getString("bname"))
          .append(", Price: ").append(rs.getDouble("price"))
          .append(", Author: ").append(rs.getString("aname"))
          .append("<br>");
    }


    if (sb.length() == 0) {
        result = "No books found for author: " + aname;
    } else {
```

```java
                result = sb.toString();
            }


        } catch (Exception e) {
            result = "Error: " + e.getMessage();
        } finally {
            try { if (rs != null) rs.close(); } catch (Exception e) {}
            try { if (ps != null) ps.close(); } catch (Exception e) {}
            try { if (con != null) con.close(); } catch (Exception e) {}
        }


        return result;
    }
}
```

Client side

```html
<html>
<head>
<title>WS for PHP-JAVA Connection</title>
</head>
<body bgcolor="yellow">
<center>
<br><br>
<font size=30 color=red>Web Services for PHP-JAVA Connection</font><br><br>


<font size=30 color=magenta>Search Books by Author in Java-Oracle Database from PHP</font><br><br>


<form method="post" action="AuthorBookDatabasePHP.php">
<font size=10 color=blue>
Enter Author Name <input type="text" name="aname"><br><br>
<input type="submit" value="Display Books" name="Display">
```

```php
</font>

</form>

</center>

</body>

</html>


<?php
if (isset($_POST["Display"])) {

    require_once("C:/wamp/www/PHP WS Client/nusoap-0.9.5/lib/nusoap.php");

    $wsdl =
"http://localhost:8081/AuthorBookDatabasePHP/services/AuthorBookDatabasePHP?wsdl";


    try {

        $client = new nusoap_client($wsdl, 'wsdl');

        $aname = $_POST['aname'];

        $params = array('aname' => $aname);

        $response = $client->call('displayBooksByAuthor', $params);


        echo "<center><font size=6 color=blue>";

        echo $response;

        echo "</font></center>";
    } catch (Exception $e) {

        echo "In SOAP Fault: " . $e->getMessage();

    }

}
?>
```

Company Product Database

```java
import java.sql.*;


public class CompanyProductDatabasePHP {
```

```java
public String displayProductsByCompany(String cname) {
    String result = "";
    Connection con = null;
    PreparedStatement ps = null;
    ResultSet rs = null;

    try {
        // Oracle DB Connection
        Class.forName("oracle.jdbc.driver.OracleDriver");
        con = DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe",
"system", "yourpassword");

        String query = "SELECT p.pno, p.pname, p.price, c.cname " +
                "FROM product p INNER JOIN company c ON p.cno = c.cno " +
                "WHERE LOWER(c.cname) = LOWER(?)";

        ps = con.prepareStatement(query);
        ps.setString(1, cname);
        rs = ps.executeQuery();

        StringBuilder sb = new StringBuilder();
        while (rs.next()) {
            sb.append("Product No: ").append(rs.getInt("pno"))
                .append(", Product Name: ").append(rs.getString("pname"))
                .append(", Price: ").append(rs.getDouble("price"))
                .append(", Company: ").append(rs.getString("cname"))
                .append("<br>");
        }

        if (sb.length() == 0) {
            result = "No products found for company: " + cname;
```

```java
            } else {

                result = sb.toString();

            }


        } catch (Exception e) {

            result = "Error: " + e.getMessage();

        } finally {

            try { if (rs != null) rs.close(); } catch (Exception e) {}

            try { if (ps != null) ps.close(); } catch (Exception e) {}

            try { if (con != null) con.close(); } catch (Exception e) {}

        }


        return result;

    }

}
```

Client side

```html
<html>

<head>

<title>WS for PHP-JAVA Connection</title>

</head>

<body bgcolor="yellow">

<center>

<br><br>

<font size=30 color=red>Web Services for PHP-JAVA Connection</font><br><br>


<font size=30 color=magenta>Search Products by Company in Java-Oracle Database from
PHP</font><br><br>


<form method="post" action="CompanyProductDatabasePHP.php">

<font size=10 color=blue>

Enter Company Name <input type="text" name="cname"><br><br>
```

```html
<input type="submit" value="Display Products" name="Display">

</font>

</form>

</center>

</body>

</html>
```

```php
<?php
if (isset($_POST["Display"])) {

    require_once("C:/wamp/www/PHP WS Client/nusoap-0.9.5/lib/nusoap.php");

    $wsdl =
"http://localhost:8081/CompanyProductDatabasePHP/services/CompanyProductDatabasePHP?wsdl";


    try {

        $client = new nusoap_client($wsdl, 'wsdl');

        $cname = $_POST['cname'];

        $params = array('cname' => $cname);

        $response = $client->call('displayProductsByCompany', $params);


        echo "<center><font size=6 color=blue>";

        echo $response;

        echo "</font></center>";
    } catch (Exception $e) {

        echo "In SOAP Fault: " . $e->getMessage();

    }
}
?>
```

Teacher Student database

```java
import java.sql.*;
```

```java
public class TeacherSubjectDatabasePHP {
    public String displaySubjectsByTeacher(String tname) {
        String result = "";
        Connection con = null;
        PreparedStatement ps = null;
        ResultSet rs = null;

        try {
            // Oracle DB Connection
            Class.forName("oracle.jdbc.driver.OracleDriver");
            con = DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe",
"system", "yourpassword");

            String query = "SELECT s.sno, s.sname, t.tname " +
                    "FROM subject s INNER JOIN teacher t ON s.tno = t.tno " +
                    "WHERE LOWER(t.tname) = LOWER(?)";

            ps = con.prepareStatement(query);
            ps.setString(1, tname);
            rs = ps.executeQuery();

            StringBuilder sb = new StringBuilder();
            while (rs.next()) {
                sb.append("Subject No: ").append(rs.getInt("sno"))
                    .append(", Subject Name: ").append(rs.getString("sname"))
                    .append(", Teacher: ").append(rs.getString("tname"))
                    .append("<br>");
            }

            if (sb.length() == 0) {
```

```
            result = "No subjects found for teacher: " + tname;

        } else {

            result = sb.toString();

        }


    } catch (Exception e) {

        result = "Error: " + e.getMessage();

    } finally {

        try { if (rs != null) rs.close(); } catch (Exception e) {}

        try { if (ps != null) ps.close(); } catch (Exception e) {}

        try { if (con != null) con.close(); } catch (Exception e) {}

    }


    return result;

    }

}
```

Client side

```
<html>

<head>

<title>WS for PHP-JAVA Connection</title>

</head>

<body bgcolor="yellow">

<center>

<br><br>

<font size=30 color=red>Web Services for PHP-JAVA Connection</font><br><br>


<font size=30 color=magenta>Search Subjects by Teacher in Java-Oracle Database from
PHP</font><br><br>


<form method="post" action="TeacherSubjectDatabasePHP.php">

<font size=10 color=blue>
```

Enter Teacher Name <input type="text" name="tname">

<input type="submit" value="Display Subjects" name="Display">

</form>

</center>

</body>

</html>

```php
<?php
if (isset($_POST["Display"])) {
    require_once("C:/wamp/www/PHP WS Client/nusoap-0.9.5/lib/nusoap.php");
    $wsdl =
"http://localhost:8081/TeacherSubjectDatabasePHP/services/TeacherSubjectDatabasePHP?wsdl";

    try {
        $client = new nusoap_client($wsdl, 'wsdl');
        $tname = $_POST['tname'];
        $params = array('tname' => $tname);
        $response = $client->call('displaySubjectsByTeacher', $params);

        echo "<center><font size=6 color=blue>";
        echo $response;
        echo "</font></center>";
    } catch (Exception $e) {
        echo "In SOAP Fault: " . $e->getMessage();
    }
}
?>
```

Car Manufacturer Database

```java
import java.sql.*;

public class ManufacturerCarDatabasePHP {
    public String displayCarsByManufacturer(String mname) {
        String result = "";
        Connection con = null;
        PreparedStatement ps = null;
        ResultSet rs = null;

        try {
            // Oracle DB Connection
            Class.forName("oracle.jdbc.driver.OracleDriver");
            con = DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe", "system", "yourpassword");

            String query = "SELECT c.cno, c.cname, c.price, m.mname " +
                    "FROM car c INNER JOIN manufacturer m ON c.mno = m.mno " +
                    "WHERE LOWER(m.mname) = LOWER(?)";

            ps = con.prepareStatement(query);
            ps.setString(1, mname);
            rs = ps.executeQuery();

            StringBuilder sb = new StringBuilder();
            while (rs.next()) {
                sb.append("Car No: ").append(rs.getInt("cno"))
                    .append(", Car Name: ").append(rs.getString("cname"))
                    .append(", Price: ").append(rs.getDouble("price"))
                    .append(", Manufacturer: ").append(rs.getString("mname"))
                    .append("<br>");
```

```
                }


            if (sb.length() == 0) {

                result = "No cars found for manufacturer: " + mname;

            } else {

                result = sb.toString();

            }


        } catch (Exception e) {

            result = "Error: " + e.getMessage();

        } finally {

            try { if (rs != null) rs.close(); } catch (Exception e) {}

            try { if (ps != null) ps.close(); } catch (Exception e) {}

            try { if (con != null) con.close(); } catch (Exception e) {}

        }


        return result;

    }

}
```

Client side

```
<html>

<head>

<title>WS for PHP-JAVA Connection</title>

</head>

<body bgcolor="yellow">

<center>

<br><br>

<font size=30 color=red>Web Services for PHP-JAVA Connection</font><br><br>


<font size=30 color=magenta>Search Cars by Manufacturer in Java-Oracle Database from
PHP</font><br><br>
```

```html
<form method="post" action="ManufacturerCarDatabasePHP.php">
<font size=10 color=blue>
Enter Manufacturer Name <input type="text" name="mname"><br><br>
<input type="submit" value="Display Cars" name="Display">
</font>
</form>
</center>
</body>
</html>
```

```php
<?php
if (isset($_POST["Display"])) {
    require_once("C:/wamp/www/PHP WS Client/nusoap-0.9.5/lib/nusoap.php");
    $wsdl = "http://localhost:8081/ManufacturerCarDatabasePHP/services/ManufacturerCarDatabasePHP?wsdl";

    try {
        $client = new nusoap_client($wsdl, 'wsdl');
        $mname = $_POST['mname'];
        $params = array('mname' => $mname);
        $response = $client->call('displayCarsByManufacturer', $params);
        echo "<center><font size=6 color=blue>";
        echo $response;
        echo "</font></center>";
    } catch (Exception $e) {
        echo "In SOAP Fault: " . $e->getMessage();
    }
}
?>
```