ASSIGNMENT ON SERVICE ORIENTED PROGRAMMING

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SEM: 6TH SEC: ’A’

SUBMITTED TO:

SUBMITTED ON:09-04-2019

**ASSIGNMENT 1**

**package** Sev;

**import** java.util.\*;

**public** **class** Main {

**public** **static** **void** printmat(**int** mat[][])

{

**int** i,j;

**for** (i=0; i<mat.length; i++)

{

**for** (j=0; j<mat[i].length; j++)

{

System.***out***.print(mat[i][j]+" ");

}

System.***out***.println(" ");

}

System.***out***.println("\n\n");

}

**public** **static** **void** logicmat(**int** mat[][])

{

**int** i,j;

**for** (i=0; i<mat.length; i++)

{

**for** (j=1; j<(mat[i].length)-1; j++)

{

**if**(mat[i][j-1]==0 && mat[i][j]==1 && mat[i][j+1]==0)

{

mat[i][j-1]=1;

mat[i][j+1]=1;

}

}

}

}

**public** **static** **int** check(**int** mat[][])

{

**int** i,j,sum=0,res=0;

**for** (i=0; i<mat.length; i++)

{

**for** (j=0; j<(mat.length); j++)

{

**if**(mat[i][j]==1)

{

sum++;

}

**if**(sum==24)

{

res=1;

System.***out***.println("Successfull");

**break**;

}

}

}

**return** res;

}

**public** **static** **void** main(String[] args)

{

**int** choice,i=0,j=0;

Scanner sc=**new** Scanner(System.***in***);

**int** matrix[][]= **new** **int**[5][5];

**int** t[][]= **new** **int**[5][5];

**int** max = 4;

**int** min = 1;

**int** range = max - min + 1;

**int** x = (**int**)(Math.*random*() \* range) + min;

**int** y = (**int**)(Math.*random*() \* range) + min;

**for** (i=0; i<matrix.length; i++)

{

**for** (j=0; j<matrix[i].length; j++)

{

matrix[i][j] = (**int**) (Math.*random*()\*2);

}

}

matrix[x][y]=9;

System.***out***.println("Blank space is at: "+(x+1)+" "+(y+1));

**for** (i=0; i<matrix.length; i++)

{

**for** (j=0; j<matrix[i].length; j++)

{

System.***out***.print(matrix[i][j]+" ");

}

System.***out***.println(" ");

}

System.***out***.println("\n\n");

*logicmat*(matrix);

**for** (i=0; i<matrix.length; i++)

{

**for** (j=0; j<matrix[i].length; j++)

{

System.***out***.print(matrix[i][j]+" ");

}

System.***out***.println(" ");

}

System.***out***.println("\n\n");

**for** (i=0; i<matrix.length; i++)

{

**for** (j=0; j<(matrix.length); j++)

{

System.***out***.println("Enter a choice");

choice=sc.nextInt();

System.***out***.println("Blank space moves towards: "+choice);

**if**(choice==1)

{

t[0][0]=matrix[x][y];

matrix[x][y]=matrix[x][y-1];

matrix[x][y-1]=t[0][0];

*logicmat*(matrix);

y=y-1;

*printmat*(matrix);

}

**if**(choice==2)

{

t[0][0]=matrix[x][y];

matrix[x][y]=matrix[x][y+1];

matrix[x][y+1]=t[0][0];

*logicmat*(matrix);

y=y+1;

*printmat*(matrix);

}

**if**(choice==3)

{

t[0][0]=matrix[x][y];

matrix[x][y]=matrix[x-1][y];

matrix[x-1][y]=t[0][0];

*logicmat*(matrix);

x=x-1;

*printmat*(matrix);

}

**if**(choice==4)

{

t[0][0]=matrix[x][y];

matrix[x][y]=matrix[x+1][y];

matrix[x+1][y]=t[0][0];

*logicmat*(matrix);

x=x+1;

*printmat*(matrix);

}

*check*(matrix);

**if**(*check*(matrix)==1)

{

**break**;

}

}

}

System.***out***.println("\n\n");

sc.close();

*printmat*(matrix);

}

}

**ASSIGNMENT 2**

MAIN CLASS

import java.util.List;

public class MainClass {

public static void main(String args[]) {

StudentParser read = new StudentParser();

List<StudentModel> readConfig = read.readConfig("StudentsData.xml");

System.out.println("The list of students : ");

for (StudentModel studentModel : readConfig) {

System.out.println(studentModel);

}

}

}

STUDENT MODEL.JAVA

public class StudentModel {

String id;

String name;

String age;

String gender;

String semester;

@Override

public String toString() {

return "{" + " id='" + id + "'" + ", name='" + name + "'" + ", age='" + age + "'" + ", gender='" + gender + "'"

+ ", semester='" + semester + "'" + "}";

}

}

STUDENT PARSER.JAVA

import java.io.FileInputStream;

import java.io.FileNotFoundException;

import java.io.InputStream;

import java.util.ArrayList;

import java.util.Iterator;

import java.util.List;

import javax.xml.stream.XMLEventReader;

import javax.xml.stream.XMLInputFactory;

import javax.xml.stream.XMLStreamException;

import javax.xml.stream.events.Attribute;

import javax.xml.stream.events.EndElement;

import javax.xml.stream.events.StartElement;

import javax.xml.stream.events.XMLEvent;

class StudentParser {

static final String ID = "id";

static final String STUDENT = "student";

static final String NAME = "name";

static final String AGE = "age";

static final String GENDER = "gender";

static final String SEMESTER = "semester";

@SuppressWarnings({ "unchecked", "null" })

public List<StudentModel> readConfig(String configFile) {

List<StudentModel> studentModels = new ArrayList<StudentModel>();

try {

XMLInputFactory inputFactory = XMLInputFactory.newInstance();

InputStream in = new FileInputStream(configFile);

XMLEventReader eventReader = inputFactory.createXMLEventReader(in);

StudentModel studentModel = null;

while (eventReader.hasNext()) {

XMLEvent event = eventReader.nextEvent();

if (event.isStartElement()) {

StartElement startElement = event.asStartElement();

if (startElement.getName().getLocalPart().equals(STUDENT)) {

studentModel = new StudentModel();

// We read the attributes from this tag and add the date

// attribute to our object

Iterator<Attribute> attributes = startElement.getAttributes();

while (attributes.hasNext()) {

Attribute attribute = attributes.next();

if (attribute.getName().toString().equals(ID)) {

studentModel.id = attribute.getValue();

}

}

}

if (event.isStartElement()) {

if (event.asStartElement().getName().getLocalPart().equals(NAME)) {

event = eventReader.nextEvent();

studentModel.name = (event.asCharacters().getData());

continue;

}

}

if (event.asStartElement().getName().getLocalPart().equals(AGE)) {

event = eventReader.nextEvent();

studentModel.age = (event.asCharacters().getData());

continue;

}

if (event.asStartElement().getName().getLocalPart().equals(GENDER)) {

event = eventReader.nextEvent();

studentModel.gender = (event.asCharacters().getData());

continue;

}

if (event.asStartElement().getName().getLocalPart().equals(SEMESTER)) {

event = eventReader.nextEvent();

studentModel.semester = (event.asCharacters().getData());

continue;

}

}

if (event.isEndElement()) {

EndElement endElement = event.asEndElement();

if (endElement.getName().getLocalPart().equals(STUDENT)) {

studentModels.add(studentModel);

}

}

}

} catch (FileNotFoundException e) {

e.printStackTrace();

} catch (XMLStreamException e) {

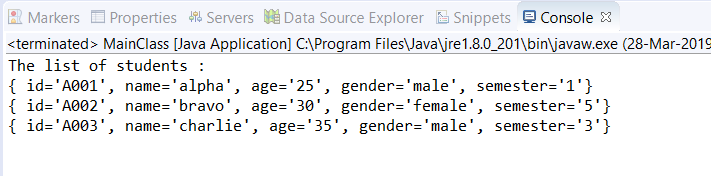
e.printStackTrace();

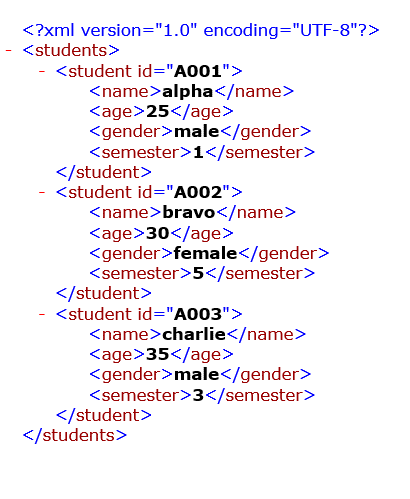
}

return studentModels;

}

}





HTML

<!DOCTYPE html>

<html>

<head>

<title>html to xml operation</title>

</head><body><h3>Enter the student details to enroll </h3>

<form action="StudentServlet" method="Get">

first name:<input type="text" name="fname" /> <br />

last name :<input type="text" name="lname" /> <br />

Reg number:<input type="number" name="reg" /> <br />

<input type="submit" value="Submit" />

</form>

</body>

</html>

import java.io.IOException;

import java.io.File;

import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletException;

import javax.servlet.annotation.WebServlet;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

import javax.xml.parsers.DocumentBuilder;

import javax.xml.parsers.DocumentBuilderFactory;

import javax.xml.transform.OutputKeys;

import javax.xml.transform.Transformer;

import javax.xml.transform.TransformerFactory;

import javax.xml.transform.dom.DOMSource;

import javax.xml.transform.stream.StreamResult;

import org.w3c.dom.Attr;

import org.w3c.dom.Document;

import org.w3c.dom.Element;

@WebServlet("/StudentServlet")

public class StudentServlet extends HttpServlet

{

private static final long serialVersionUID = 1L;

int i = 0;

String p1, p2, p3;

protected void doGet(HttpServletRequest request, HttpServletResponse response)throws ServletException, IOException

{

p1 = request.getParameter("fname");

p2 = request.getParameter("lname");

p3 = request.getParameter("reg");

PrintWriter out = response.getWriter();

out.println("<!DOCTYPE html><html><body>Insertion Sucessful</body></html>");

String filename = "C:\\Users\\asgee\\Desktop\\a.xml";

try

{

DocumentBuilderFactory documentBuilderFactory = DocumentBuilderFactory.newInstance();

DocumentBuilder documentBuilder = documentBuilderFactory.newDocumentBuilder();

TransformerFactory transformerfactory = TransformerFactory.newInstance();

Transformer transformer = transformerfactory.newTransformer();

StreamResult streamresult = new StreamResult(new File(filename));

if (i == 0)

{

Document document = documentBuilder.newDocument();

transformer.setOutputProperty(OutputKeys.DOCTYPE\_SYSTEM, "xmll.dtd");

Element students = document.createElement("students");

document.appendChild(students);

action(document, students);

DOMSource source = new DOMSource(document);

transformer.transform(source, streamresult);

}

else

{

Document document = documentBuilder.parse(filename);

transformer.setOutputProperty(OutputKeys.DOCTYPE\_SYSTEM, "xmll.dtd");

Element students = document.getDocumentElement();

action(document, students);

DOMSource source = new DOMSource(document);

transformer.transform(source, streamresult);

}

}

catch(Exception e)

{

}

}

private void action(Document document, Element students)

{

Element student = document.createElement("student");

students.appendChild(student);

Attr attr = document.createAttribute("id");

attr.setValue(Integer.toString(++i));

student.setAttributeNode(attr);

Element fname = document.createElement("fname");

fname.appendChild(document.createTextNode(p1));

student.appendChild(fname);

Element lname = document.createElement("lname");

lname.appendChild(document.createTextNode(p2));

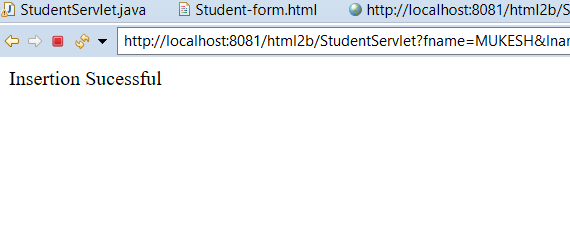
student.appendChild(lname);

Element reg = document.createElement("reg");

reg.appendChild(document.createTextNode(p3));

student.appendChild(reg);

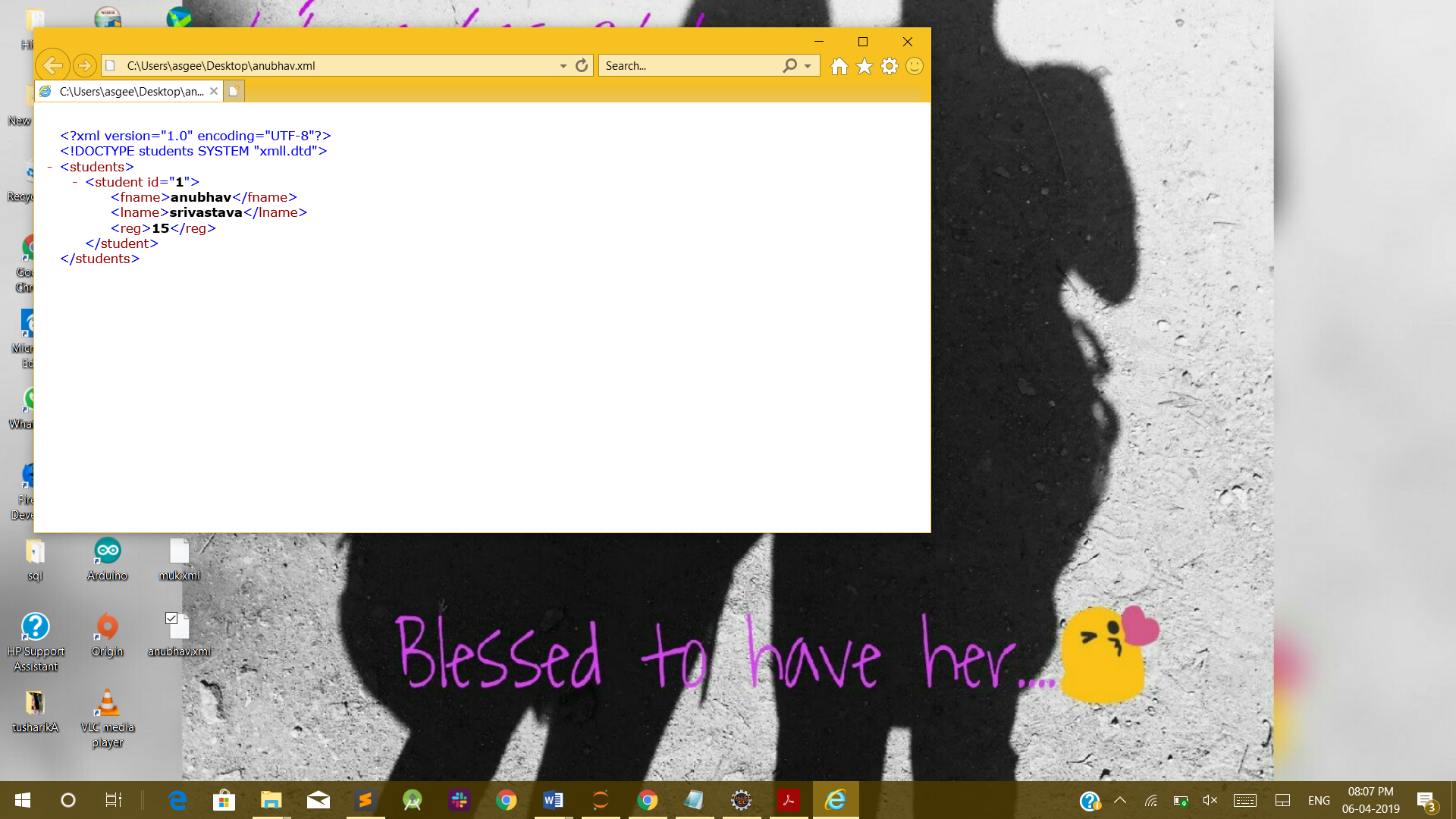
}

}

BEFORE INSERTION

<XML VERSION=”1.0” encoding=”UTF-8”> <students id=’1>

AFTER INSERTION OF DATA



**ASSIGNMENT 3**

import java.io.IOException;

import java.io.PrintWriter;

import java.sql.Connection;

import java.sql.PreparedStatement;

import java.sql.ResultSet;

import javax.servlet.ServletException;

import javax.servlet.annotation.WebServlet;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

import p1.Connector;

@WebServlet("/StudentView")

public class StudentView extends HttpServlet {

protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

String num=request.getParameter("reg\_no");

String pass=request.getParameter("pass");

String name;

int m,s,e;

boolean t=false;

PrintWriter out=response.getWriter();

response.setContentType("text/html");

try {

Connection con=Connector.getconnection();

PreparedStatement stmt=con.prepareStatement("Select \* from student\_details");

ResultSet rs=stmt.executeQuery();

while(rs.next()) {

if(num.equals(Integer.toString(rs.getInt(1))) && pass.equals(rs.getString(3))) {

name=rs.getString(2);

m=rs.getInt(4);

s=rs.getInt(5);

e=rs.getInt(6);

out.print("<head><link rel=\"stylesheet\" type=\"text/css\" href=\"Style.css\"></head>");

out.print("<div class='sub'>");

out.print("<h1 align=\"center\">ALLIANCE UNIVERSITY</h1>");

out.print("<h2 align='center'>STUDENT DETAILS </h2><br><br>");

out.print("<table align='center'>");

out.print("<tr><td><h2>Student name : </h2></td><td><h2>"+name+"</h2></td></tr>");

out.print("<tr><td><h2>register number : </h2></td><td><h2>"+num+"</h2></td></tr>");

out.print("<tr><td><h2>Semester : </h2></td><td><h2>VI SEM</h2></td></tr>");

out.print("</table><br><br>");

/\*out.print("<h2>marks sheet : <h2><br>");\*/

out.print("<table border='1' align='center'");

out.print("<tr><th>subject</th><th>marks obtained</th><th>total marks</th><th>status</th><th>peercentage</th></tr>");

out.print("<tr><td>maths</td><td>"+m+"</td><td>50</td><td>"+status(m)+"</td><td>"+m\*2+"%</td></tr>");

out.print("<tr><td>science</td><td>"+s+"</td><td>50</td><td>"+status(s)+"</td><td>"+s\*2+"%</td></tr>");

out.print("<tr><td>english</td><td>"+e+"</td><td>50</td><td>"+status(e)+"</td><td>"+e\*2+"%</td></tr>");

out.print("</table>");

out.print("<a href='Main\_Login.html' align='bottom'>logout<a>");

out.print("</div>");

t=true;

break;

}else if(num.equals("admin") && pass.equals("admin")) {

response.sendRedirect("Faculty.jsp");

}

}

if(t==false) {

out.println("<h1 align=\"center\">STUDENT NOT FOUND</h1>");

}

} catch (Exception e1) {

e1.printStackTrace();

}

}

public String status(int marks) {

if(marks>=25)

return "pass";

else

return "<p class='fail'>fail</p>";

}

}

<!DOCTYPE html>

<html>

<head>

<meta charset="ISO-8859-1">

<title>Main\_Login</title>

<link rel="stylesheet" type="text/css" href="Style.css">

</head>

<body>

<div class="main">

<h1>ALLIANCE UNIVERSIY</h1>

<h2>STUDENT PORTAL LOGIN </h2><br><br>

<form action="StudentView" method="get">

<div class="login">

<h3>login</h3>

<table>

<tr><td>Register Number :</td><td> <input type="text" name="reg\_no"></td></tr>

<tr><td>password :</td><td> <input type="password" name="pass"></td></tr>

<tr><td><input type="submit" value="Login"></td><td> <input type="reset"></td></tr>

</table>

</p>

</div>

</form>

</div>

</body>

</html>

package p1;

import java.sql.Connection;

import java.sql.DriverManager;

public class Connector {

public static Connection getconnection() throws Exception{

try {

String driver="com.mysql.cj.jdbc.Driver";

String url="jdbc:mysql://localhost/web\_portal";

String user="root";

String pass="qwerty";

Class.forName(driver);

Connection conn= DriverManager.getConnection(url,user,pass);

return conn;

}catch(Exception e) {System.out.println(e);}

return null;

}

}

<%@ page language="java" contentType="text/html; charset=ISO-8859-1"

pageEncoding="ISO-8859-1"%>

<%@page import="java.sql.\*" %>

<%@page import="p1.Connector" %>

<!DOCTYPE html>

<html>

<head>

<meta charset="ISO-8859-1">

<title>faculty login</title>

<link rel="stylesheet" type="text/css" href="Style.css">

</head>

<body>

<div class="faculty">

<h1>ALLIANCE UNIVERSITY</h1>

<H2>FACULTY PORTAL</H2>

<table><tr><th>reg\_no</th><th>name</th><th>math</th><th>science</th><th>english</th></tr>

<%

try{

Connection con=Connector.getconnection();

PreparedStatement stmt=con.prepareStatement("Select \* from student\_details");

ResultSet rs=stmt.executeQuery();

while(rs.next()){

out.print("<tr><td>"+rs.getInt(1)+"</td><td>"+rs.getString(2)+"</td><td>"+rs.getInt(4)+"</td><td>"+rs.getInt(5)+"</td><td>"+rs.getInt(6)+"</td></tr>");

}

}catch(Exception e){

e.printStackTrace();

}

%>

</table>

</div>

</body>

</html>

@charset "ISO-8859-1";

body{

font-family:helvetica,ariel;

}

.main h1,h2{

background-color:#d8d8d8;

text-align: center;

margin-left:auto;

margin-right:auto;

width:400px;

border-radius:20px;

}

.sub .fail{

color:red;

}

.main .login table,td,th{

align:center;

text-align:center;

margin-left:auto;

margin-right:auto;

}

.login{

background-color:#f38120;

margin-left:auto;

margin-right:auto;

width:400px;

padding:5px;

border-radius:10px;

}

.login h3{

color:white;

text-align:center;

}

.login td{

color:white;

}

.sub h1,h2{

background-color:#bcd7ff;

text-align: center;

margin-left:auto;

margin-right:auto;

width:200px;

border-radius:20px;

}

.faculty h1{

align:center;

text-align:center;

margin-left:auto;

margin-right:auto;

width:400px;

border-radius:20px;

background-color:#00ffdf;

}

.faculty h2{

align:center;

margin-left:auto;

margin-right:auto;

width:300px;

border-radius:20px;

background-color:#936897;

}

.faculty table{

align:center;

margin-left:auto;

margin-right:auto;

width:70%;

border:1px solid black;

}

.faculty th{

align:center;

margin-left:auto;

margin-right:auto;

border:1px solid black;

}

.faculty td{

align:center;

margin-left:auto;

margin-right:auto;

border:1px solid black;

}

