COMSATS UNIVERSITY, ISLAMABAD

Objectr oriented Programming

PROJECT

Football League Management System

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| --- | --- |
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# Introduction

The purpose of this project is to provide a friendly environment to maintain the details of football leagues. As from the name, the project is inspired by the football business logic and clear management of leagues with points, games played, lost matches, win matches and other details of teams including team name, team manager/coach, and team nickname .i.e. FCB for Football Club Barcelona. The User Interface provides clear view of how the app will work. This app includes the different panel for admin and different panel for normal user. Admin can login using the username and password below:

Username: “admin” Password: “admin”

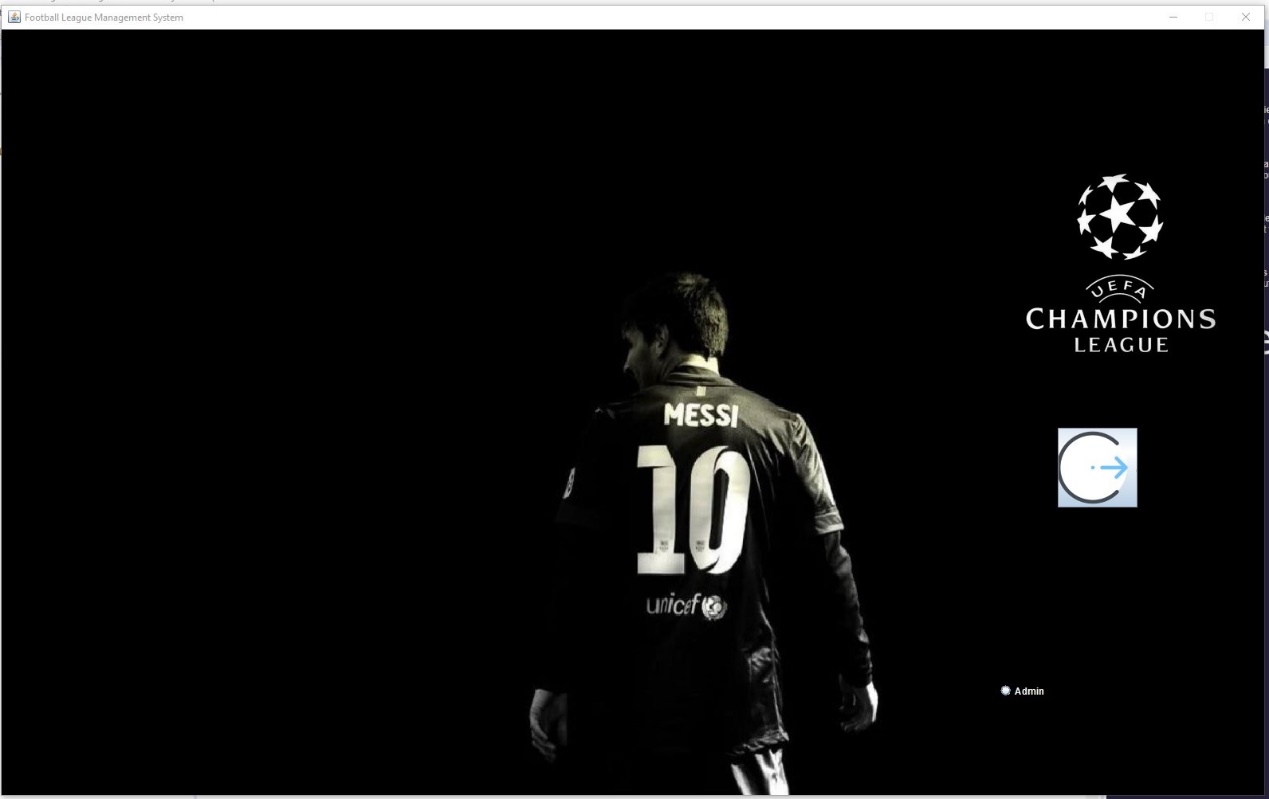
Whereas, a user can login by just clicking the app login button which is shown on the execution of app. This app uses the data structure “STACK” for the implementation of “back” button which is used for going back on the previous panel or window in the app. The background wallpapers of the app is downloaded from the internet.

Basic Functions:

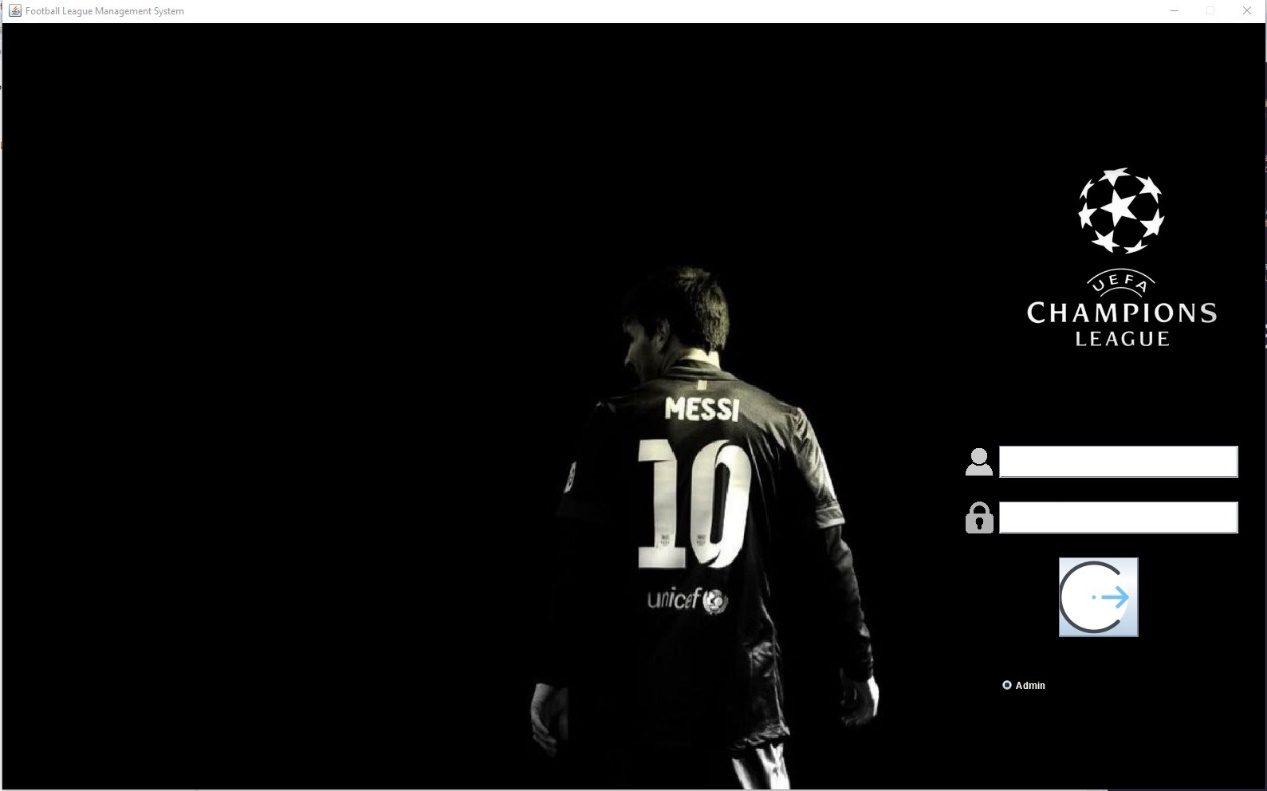
* Create a League
* Edit a League
* View a League
  + View League from Admin Panel
  + View League from User Panel
* Data storage into file of Leagues using Serialization

# Inputs and Outputs

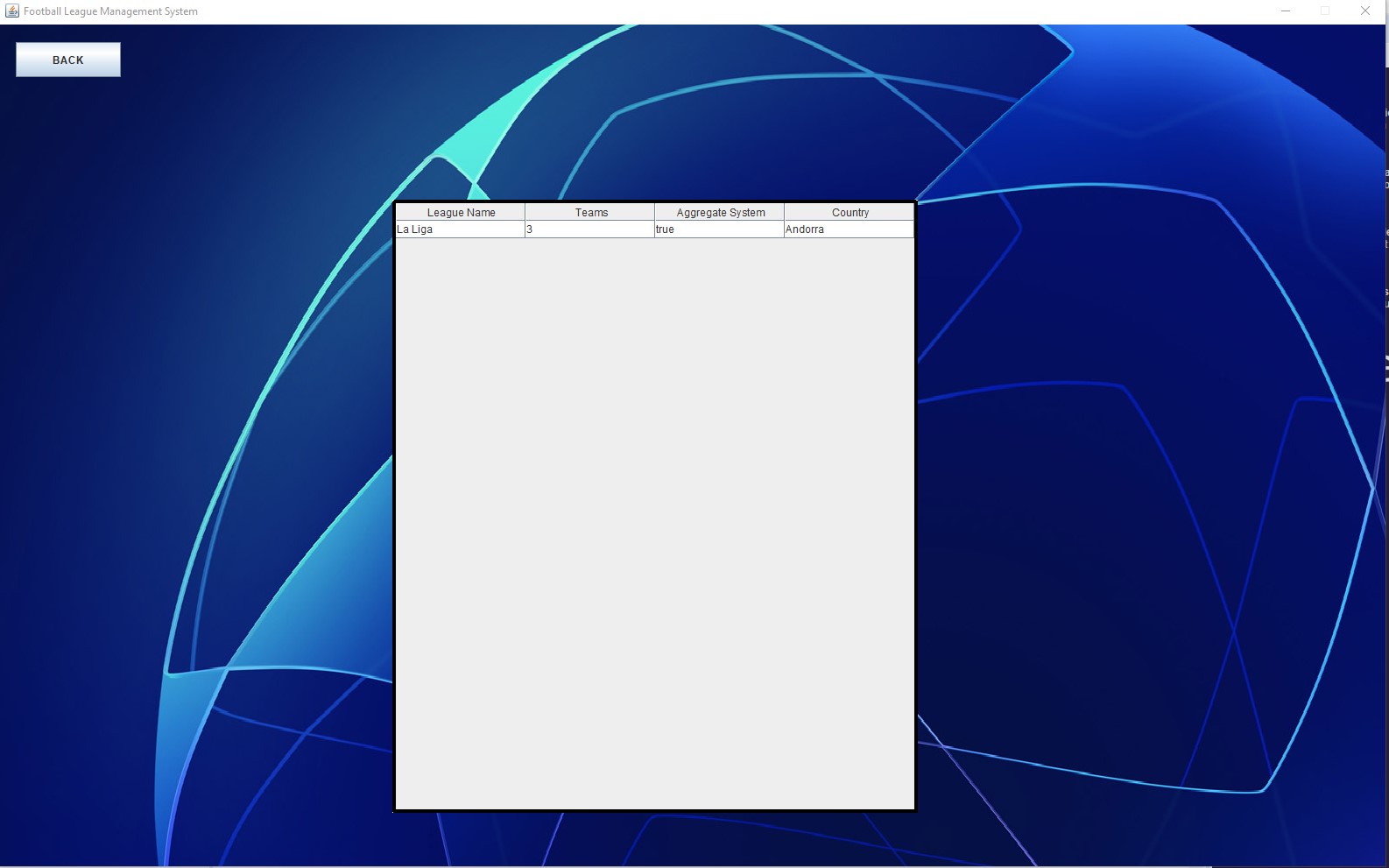
On the Execution of app, the app shows login for any user which can be logged in by just clicking the Login button. The following picture can be viewed on the execution of app:



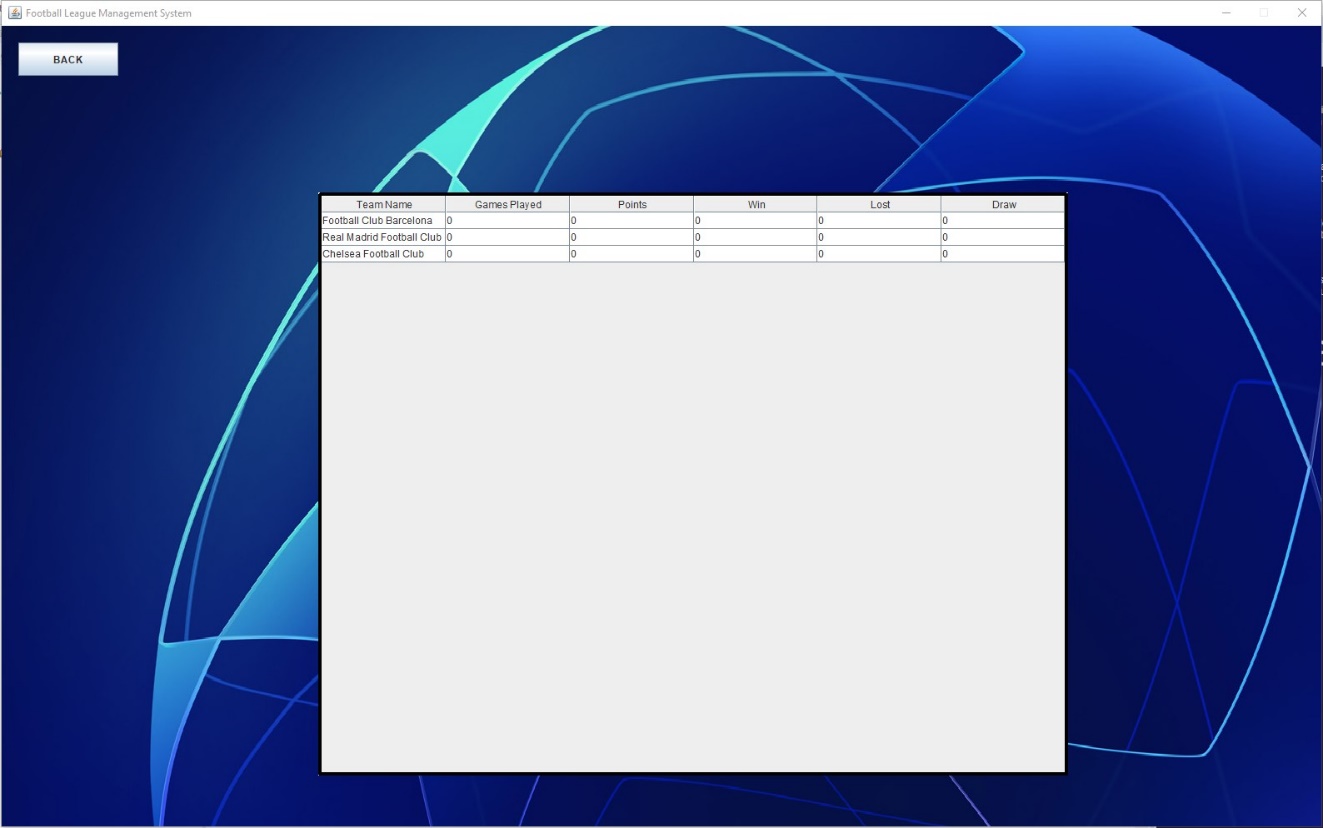
The radio button on the bottom left side of the window is for logging into admin panel. This can be viewed in the following picture:



By clicking without admin radio button selected we can successfully login into user panel. In which we can view leagues. Following picture shows this scenario:



There is one league right now stored in the table which is shown as named “La Liga” we can see the table of the leagues with number of teams and country. By clicking on the league we can view inner league details table, which includes Teams names, points, games played, won matches, lost matches and draw matches. This can be viewed in the following picture:



We can use “back” button which is on the top left of the window. By clicking “BACK” the previous panel from the stack is called and displayed on the window.

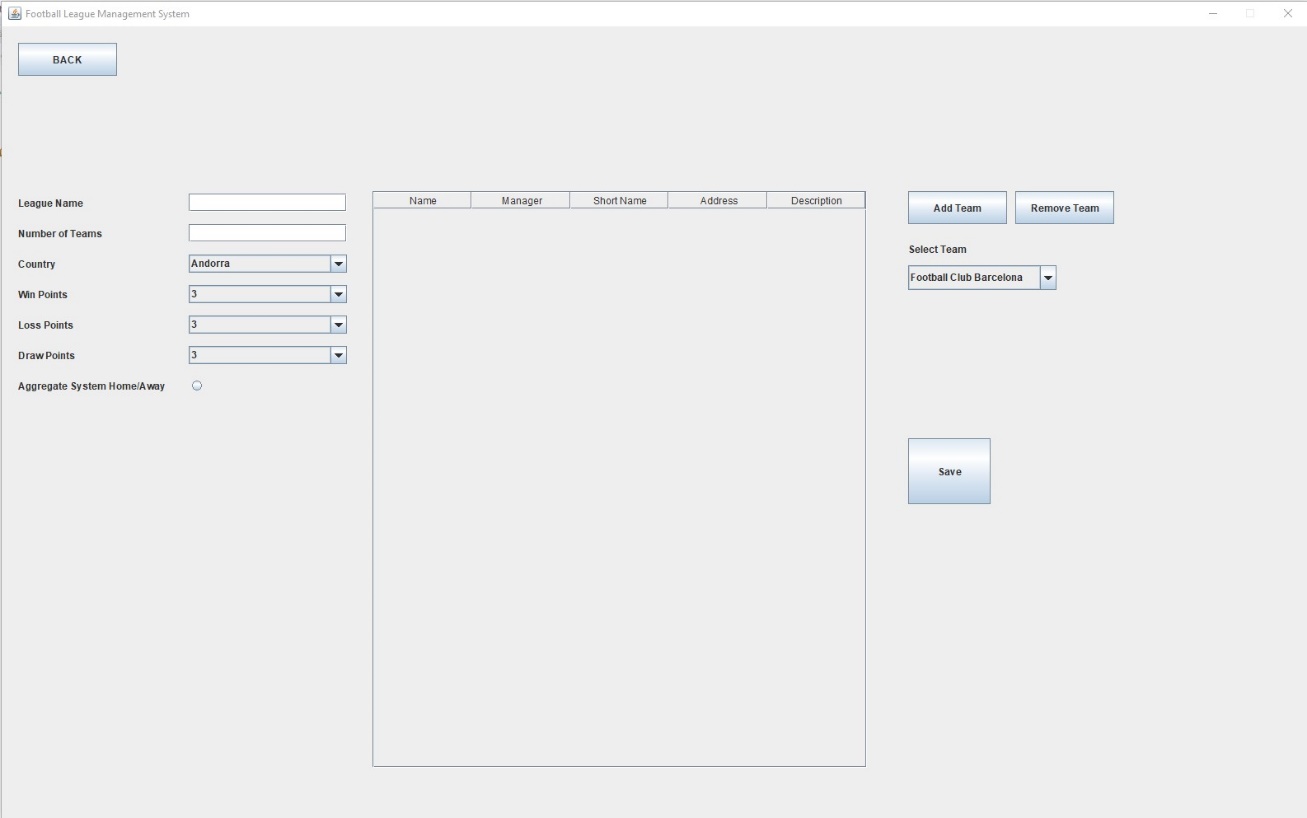
This was all for the user panel. We can view the admin panel on logging into admin from login panel. On logging to admin. We can view following panel:



We can see buttons of League, Team, Player and Stadium. Right now, only league panel is implemented as a part of project. The other logics of Team, Player, Stadium is not yet implemented as it takes a lot of time and diverts from the original project. By clicking League button we can see following Panel:



The above panel shows the main functionality of the Project. As from the name of the first button “Create New League” we can create a new league and the following panel can be viewed below:



By inputting the data of the league, which includes:

* League Name
* Number of Teams
* Country of League
* Points of Win, Draw and Loss points
* Aggregate radio button for making the league aggregate system which is European league system
* Add Team to add the select team from Combo Box
* Save button to save the league

By clicking on the save button the league details will be saved into file

View league panel is shown above which is same side as of user login.

The Class diagram of the application is given below:

# 

Figure 1 Class Diagram

# MVC Classes

Model Classes:

1. League
2. Team

View Classes:

1. LoginPanel
2. AdminPanel
3. LeaguePanel
4. CreateLeaguePanel
5. EditLeaguePanel
6. ViewLeaguePanel

Controller Classes:

1. Controller
2. LoginController
3. AdminController
4. LeagueController
5. CreateLeagueController
6. ViewLeagueController
7. BackController

# JAVA Code

## AdminPanel

package league;

import javax.imageio.ImageIO;

import javax.swing.\*;

import java.awt.\*;

import java.awt.event.ActionListener;

import java.awt.image.BufferedImage;

import java.io.File;

public class AdminPanel extends JPanel {

private JButton league,team,player,stadium;

private BufferedImage adminIcon;

private JButton logOut;

public void addActionListener(ActionListener al) {

league.addActionListener(al);

team.addActionListener(al);

player.addActionListener(al);

logOut.addActionListener(al);

}

public AdminPanel() {

super();

JPanel menu = new JPanel();

setLayout(null);

menu.setLayout(new GridLayout(2,2,25,25));

menu.setOpaque(false);

logOut=new JButton("Log Out");

logOut.setBounds(1480, 160, 80, 30);

add(logOut);

ImageIcon leagueIcon=new ImageIcon("league.png");

ImageIcon teamIcon = new ImageIcon("team.png");

ImageIcon playerIcon = new ImageIcon("player.png");

ImageIcon stadiumIcon = new ImageIcon("stadium.png");

league= new JButton("League",leagueIcon);

team=new JButton("Team",teamIcon);

player= new JButton("Player",playerIcon);

stadium = new JButton("Stadium",stadiumIcon);

menu.add(league);

menu.add(team);

menu.add(player);

menu.add(stadium);

menu.setVisible(true);

menu.setBounds(350,250,800,600);

add(menu);

setVisible(true);

}

@Override

protected void paintComponent(Graphics g) {

// TODO Auto-generated method stub

super.paintComponent(g);

Graphics2D g2d = (Graphics2D) g;

//g2d.setFont(new Font("serif",Font.BOLD,20));

// g2d.drawString("ADMIN PANEL", 600, 300);

try {

adminIcon=ImageIO.read(new File("adminPanel.png"));

BufferedImage bg = ImageIO.read(new File("campNou.jpg"));

g2d.drawImage(bg,0,0,1600,1000,null);

g2d.drawImage(adminIcon,1480,20,80,100,null);

g2d.drawString("User : admin", 1480, 140);

}

catch(Exception ex) {

System.out.println("FILE NOT FOUND!");

}

}

}

## CreateLeaguePanel

package league;

import java.awt.BorderLayout;

import java.awt.FlowLayout;

import java.awt.Font;

import java.awt.Graphics;

import java.awt.Graphics2D;

import java.awt.GridLayout;

import java.awt.ScrollPane;

import java.awt.event.ActionEvent;

import java.awt.event.ActionListener;

import java.awt.image.BufferedImage;

import java.io.File;

import java.io.FileInputStream;

import java.io.FileNotFoundException;

import java.io.IOException;

import java.io.ObjectInputStream;

import java.util.ArrayList;

import java.util.Locale;

import javax.imageio.ImageIO;

import javax.swing.BoxLayout;

import javax.swing.JButton;

import javax.swing.JComboBox;

import javax.swing.JLabel;

import javax.swing.JPanel;

import javax.swing.JRadioButton;

import javax.swing.JScrollPane;

import javax.swing.JTabbedPane;

import javax.swing.JTable;

import javax.swing.JTextField;

import javax.swing.SpringLayout;

import javax.swing.table.DefaultTableModel;

public class CreateLeaguePanel extends JPanel {

//League(String leagueName, int noOfTeams,boolean aggregateSys,String country)

private JTextField leagueName,noOfTeams;

private JRadioButton aggregateSys;

private JComboBox country,winPoints,lossPoints,drawPoints,selectTeam;

private ArrayList<Team> listOfTeams;

private ArrayList<Team> selectedTeams;

private JButton addTeamsBtn,addTeam,removeTeam,saveBtn;

private JPanel addTeamsPanel;

private String[] points= {"3","2","1","0"};

private JTable teamTable;

private BufferedImage tableBackground;

public void addActionListener(ActionListener al) {

this.saveBtn.addActionListener(al);

}

public String getName() {

return leagueName.getText();

}

public int getNoOfTeams() {

try {

return Integer.valueOf(noOfTeams.getText());

}

catch (Exception e) {

// TODO: handle exception

System.out.println("No Teams Entered in this panel!");

}

return -1;

}

public String getCountry() {

return (String)country.getSelectedItem();

}

public boolean getAggregateSys() {

return aggregateSys.isSelected();

}

public int getWinPoints() {

return Integer.valueOf((String)winPoints.getSelectedItem());

}

public int getLossPoints() {

return Integer.valueOf((String)lossPoints.getSelectedItem());

}

public int getDrawPoints() {

return Integer.valueOf((String)drawPoints.getSelectedItem());

}

public CreateLeaguePanel() throws ClassNotFoundException, IOException {

// setLayout(new GridLayout(3,3,20,20));

setLayout(null);

JPanel genInfoPanel = new JPanel();

genInfoPanel.setLayout(new GridLayout(7,2,15,15));

genInfoPanel.add(new JLabel("League Name"));

genInfoPanel.add(leagueName=new JTextField(40));

genInfoPanel.add(new JLabel("Number of Teams"));

genInfoPanel.add(noOfTeams=new JTextField(4));

genInfoPanel.add(new JLabel("Country"));

genInfoPanel.add(country=new JComboBox(getCountries()));

genInfoPanel.add(new JLabel("Win Points"));

genInfoPanel.add(winPoints=new JComboBox(points));

genInfoPanel.add(new JLabel("Loss Points"));

genInfoPanel.add(lossPoints=new JComboBox(points));

genInfoPanel.add(new JLabel("Draw Points"));

genInfoPanel.add(drawPoints=new JComboBox(points));

genInfoPanel.add(new JLabel("Aggregate System Home/Away"));

genInfoPanel.add(aggregateSys=new JRadioButton());

String[] tabHead={"Name","Manager","Short Name","Address","Description"};

teamTable = new JTable();

DefaultTableModel model = new DefaultTableModel();

model.setColumnIdentifiers(tabHead);

teamTable.setModel(model);

teamTable.setRowHeight(20);

teamTable.setBounds(450,200, 600,700 );

teamTable.setEnabled(false);

JScrollPane jsp = new JScrollPane(teamTable);

jsp.setBounds(450,200, 600,700);

//add(teamTable);

add(jsp);

addTeam = new JButton("Add Team");

addTeam.setBounds(1100, 200, 120, 40);

selectedTeams=new ArrayList<Team>();

addTeam.addActionListener(new ActionListener() {

@Override

public void actionPerformed(ActionEvent e) {

try {

if(selectedTeams.size()<getNoOfTeams() ) {

Team item =listOfTeams.get(selectTeam.getSelectedIndex());

if(selectedTeams.contains(item)) {

System.out.println("Already Exists (TEAM)");

return;

}

String[] itemToList= {item.getName(),item.getManager(),item.getShortName(),item.getAddress(),item.getDescription()};

model.addRow(itemToList);

selectedTeams.add(item);

}

}

catch(Exception ex) {

System.out.println("You haven't entered the number of teams");

}

}

});

add(addTeam);

removeTeam=new JButton("Remove Team");

removeTeam.setBounds(1230,200,120,40);

add(removeTeam);

JLabel selectTeamLbl = new JLabel("Select Team");

selectTeamLbl.setBounds(1100,250,120,40);

add(selectTeamLbl);

try {

listOfTeams=Team.readTeams();

} catch (ClassNotFoundException | IOException e) {

// TODO Auto-generated catch block

e.printStackTrace();

}

selectTeam = new JComboBox(listOfTeams.toArray());

selectTeam.setBounds(1100,290,180,30);

add(selectTeam);

genInfoPanel.setBounds(20, 200, 400,250);

add(genInfoPanel);

saveBtn=new JButton("Save");

saveBtn.setBounds(1100, 500, 100, 80);

add(saveBtn);

}

public JButton getSaveBtn() {

return this.saveBtn;

}

public ArrayList<Team> getSelectedTeams(){

return this.selectedTeams;

}

public String[] getCountries() {

String[] countryCode = Locale.getISOCountries();

String[] countryList = new String[countryCode.length];

for (int i = 0; i < countryList.length; i++) {

Locale locale = new Locale("", countryCode[i]);

countryList[i] = locale.getDisplayCountry();

}

return countryList;

}

/\*

public void paintComponent(Graphics g) {

Graphics2D g2d = (Graphics2D) g;

try {

tableBackground = ImageIO.read(new File("createLeagueLayoutB.jpg"));

} catch (IOException e) {

// TODO Auto-generated catch block

e.printStackTrace();

}

g2d.drawImage(tableBackground,0,0,1600,1000,null);

}\*/

}

## EditLeaguePanel

package league;

import java.awt.Color;

import java.awt.Font;

import java.awt.FontMetrics;

import java.awt.Graphics;

import java.awt.Image;

import java.awt.Rectangle;

import java.awt.Shape;

import java.awt.event.ActionEvent;

import java.awt.event.ActionListener;

import java.awt.image.ImageObserver;

import java.io.IOException;

import java.text.AttributedCharacterIterator;

import java.util.ArrayList;

import javax.swing.JButton;

import javax.swing.JPanel;

public class EditLeaguePanel extends ViewLeaguePanel {

private JButton deleteBtn,editBtn;

public void addActionListener(ActionListener l) {

this.deleteBtn.addActionListener(l);

this.editBtn.addActionListener(l);

}

public EditLeaguePanel() throws ClassNotFoundException, IOException {

deleteBtn = new JButton("Delete");

editBtn = new JButton("Edit");

deleteBtn.setBounds(1100, 200, 120, 40);

editBtn.setBounds(1100, 260, 120, 40);

add(deleteBtn);

add(editBtn);

}

public void deleteLeague() throws IOException {

try {

int index = getTeamTable().getSelectedRow();

League.removeLeague(index);

repaint();

validate();

}

catch(Exception e1) {

System.out.println("No League Selected!");

}

}

public JPanel getSpecTable() {

JPanel panel = new JPanel();

panel.setLayout(null);

JPanel specTable = super.getSpecTable();

specTable.setBounds(100,200, 900,700);

panel.add(specTable);

JButton addWin,addLost,addDraw,delete;

addWin= new JButton("Add Win");

addWin.setBounds(1020,200, 120,30 );

addWin.addActionListener(new ActionListener() {

@Override

public void actionPerformed(ActionEvent e) {

int index=getSpecJTable().getSelectedRow();

League.readFile().get(index)

}

});

addLost = new JButton("Add Lost");

addLost.setBounds(1150,200, 120,30 );

addDraw = new JButton("Add Draw");

addDraw.setBounds(1280,200, 120,30 );

delete = new JButton("Delete");

delete.setBounds(1020,250,120,30);

panel.add(addWin);

panel.add(addLost);

panel.add(addDraw);

panel.add(delete);

return panel;

}

public void paintComponent(Graphics g) {

super.paintComponent(g);

}

}

## LeaguePanel

package league;

import java.awt.BorderLayout;

import java.awt.Graphics;

import java.awt.Graphics2D;

import java.awt.GridLayout;

import java.awt.event.ActionListener;

import java.awt.image.BufferedImage;

import java.io.File;

import javax.imageio.ImageIO;

import javax.swing.BoxLayout;

import javax.swing.JButton;

import javax.swing.JPanel;

public class LeaguePanel extends JPanel {

//create league,edit league view league//recent leagues maybe\*\*

private JButton createLeague,editLeague,viewLeague;

public void addActionListener(ActionListener l) {

createLeague.addActionListener(l);

editLeague.addActionListener(l);

viewLeague.addActionListener(l);

back.addActionListener(l);

}

public LeaguePanel() {

super();

setLayout(null);

JPanel menu = new JPanel( );

menu.setLayout(new GridLayout(1,3,25,25));

createLeague=new JButton("Create New League");

editLeague = new JButton("Edit League");

viewLeague = new JButton("View League");

back=new JButton("BACK");

back.setBounds(20,20,120,40);

add(back);

menu.add(createLeague);

menu.add(editLeague);

menu.add(viewLeague);

menu.setBounds(350,350,900,300);

menu.setOpaque(false);

add(menu);

}

@Override

protected void paintComponent(Graphics g) {

super.paintComponent(g);

Graphics2D g2d = (Graphics2D) g;

try {

BufferedImage bg = ImageIO.read(new File("premiereLeague.jpg"));

g2d.drawImage(bg,0,0,1600,1000,null);

}

catch(Exception IOException) {

System.out.println("LeaguePanel: Background NOT FOUND!");

}

}

}

## LoginPanel

package league;

import javax.imageio.ImageIO;

import javax.swing.\*;

import javax.swing.border.Border;

import java.awt.\*;

import java.awt.image.BufferedImage;

import java.io.File;

import java.io.IOException;

import java.awt.event.ActionListener;

import java.awt.event.ActionEvent;

public class LoginPanel extends JPanel{

private JTextField username;

private JPasswordField password;

private BufferedImage img,imgB,userIcon,passIcon,adminIcon,banner;

private JButton login;

private JRadioButton isAdmin;

private JLabel err;

public JTextField getUsernameField() {

return this.username;

}

public JPasswordField getPasswordField() {

return this.password;

}

public JButton getLoginBtn() { //radio button

return this.login;

}

public JRadioButton getAdminBtn() {

return this.isAdmin;

}

public void addActionListener(ActionListener al) {

getLoginBtn().addActionListener(al);

getAdminBtn().addActionListener(al);

}

public JLabel getErr() {

return this.err;

}

public LoginPanel() {

super();

setPreferredSize(new Dimension(1600,1000));

setLayout(null);

username = new JTextField(60);

username.setBounds(1250,530,300,40);

username.setVisible(false);

password = new JPasswordField(60);

password.setBounds(1250,600,300,40);

password.setVisible(false);

ImageIcon loginIcon = new ImageIcon("signin.png");

login= new JButton("login");

login.setIcon(loginIcon);

login.setBounds(1325,500,100,100); //670

//ImageIcon adminIcon = new ImageIcon("admin.png");

//ImageIcon userIcon = new ImageIcon("user.png");

isAdmin=new JRadioButton("Admin",false);

isAdmin.setForeground(Color.white);

isAdmin.setBackground(Color.BLACK);

isAdmin.setBounds(1250, 780, 100, 100);

add(isAdmin);

add(login);

add(password);

add(username);

err = new JLabel("Invalid Username or Password!");

err.setForeground(Color.yellow);

err.setBounds(1250,490,300,40);

err.setVisible(false);

add(err);

//add(getDataPanel(),BorderLayout.LINE\_END);

setVisible(true);

}

public void paintComponent(Graphics g){//for image

Graphics2D g2d = (Graphics2D) g;

try{

img = ImageIO.read(new File("login3.jpg"));

imgB=ImageIO.read(new File("login2.jpg"));

userIcon=ImageIO.read(new File("username.png"));

passIcon = ImageIO.read(new File("password.png"));

adminIcon= ImageIO.read(new File("admin.png"));

banner = ImageIO.read(new File("banner.jpg"));

}

catch(IOException e){

System.out.println(e.toString());

}

//g2d.drawString("Welcome to\nFootball League Management System",400,400);

g2d.drawImage(img,0,0,1700,1000,null);

g2d.drawImage(imgB,1200,0,400,1000,null);

//g2d.drawImage(banner,0,0,1600,200,null);

g2d.setColor(Color.white);

g2d.setStroke(new BasicStroke(2));

//g2d.drawRect(1200,0,400,1000);

//g2d.drawLine(1200, 500, 1600, 500);

if(isAdmin.isSelected()) {

g2d.drawImage(userIcon,1205,530,40,40,null);

g2d.drawImage(passIcon,1205,600,40,40,null);

}

//g2d.drawImage(adminIcon,1100, 780, 40, 40,null);

}

}

## ViewLeaguePanel

package league;

import java.awt.Color;

import java.awt.Component;

import java.awt.Graphics;

import java.awt.Graphics2D;

import java.awt.Insets;

import java.awt.event.ActionEvent;

import java.awt.event.ActionListener;

import java.awt.event.MouseEvent;

import java.awt.event.MouseListener;

import java.awt.image.BufferedImage;

import java.io.File;

import java.io.IOException;

import javax.imageio.ImageIO;

import javax.swing.JButton;

import javax.swing.JPanel;

import javax.swing.JScrollPane;

import javax.swing.JTable;

import javax.swing.border.Border;

import javax.swing.border.LineBorder;

import javax.swing.table.DefaultTableModel;

public class ViewLeaguePanel extends JPanel {

private JTable teamTable;

private DefaultTableModel model;

private BufferedImage tableBackground;

public ViewLeaguePanel() throws ClassNotFoundException, IOException {

setLayout(null);

String[] tabHead={"League Name","Teams","Aggregate System","Country"};

teamTable=new JTable();

model = new DefaultTableModel(League.toTwoDim(),tabHead);

//model.setColumnIdentifiers(tabHead);

refreshTable();

teamTable.setModel(model);

teamTable.setRowHeight(20);

teamTable.setBounds(450,200, 600,700 );

JScrollPane jsp = new JScrollPane(teamTable);

jsp.setBounds(450,200, 600,700);

jsp.setBorder(new LineBorder(Color.BLACK, 4, true));

add(jsp);

setVisible(true);

}

public void refreshTable() throws ClassNotFoundException, IOException {

String[] tabHead={"League Name","Teams","Aggregate System","Country"};

model = new DefaultTableModel(League.toTwoDim(),tabHead);

}

JTable getSpecJTable() {

return specTable;

}

private JTable specTable;

public JPanel getSpecTable() {

JPanel specPan = new JPanel();

specPan.setLayout(null);

specPan.setBounds(380,200, 900,700);

int index = getTeamTable().getSelectedRow();

if(index == -1) {

index = 0;

}

String[] tabHead = {"Team Name","Games Played","Points","Win","Lost","Draw"};

DefaultTableModel model=new DefaultTableModel();

try {

model = new DefaultTableModel(League.readFile().get(index).toTwoDimLeag(),tabHead);

} catch (ClassNotFoundException | IOException e1) {

System.out.println("Couldn't Found any Team");

}

specTable = new JTable();

specTable.setModel(model);

specTable.setRowHeight(20);

specTable.setBounds(0,0, 900,700 );

JScrollPane jsp = new JScrollPane(specTable);

specPan.add(jsp);

jsp.setBounds(0,0, 900,700 );

jsp.setBorder(new LineBorder(Color.BLACK, 4, true));

return specPan;

}

public JTable getTeamTable() {

return this.teamTable;

}

public void paintComponent(Graphics g) {

Graphics2D g2d = (Graphics2D) g;

try {

tableBackground = ImageIO.read(new File("leagueTable.jpg"));

} catch (IOException e) {

// TODO Auto-generated catch block

e.printStackTrace();

}

g2d.drawImage(tableBackground,0,0,1600,1000,null);

}

}

## Team

package league;

import java.io.File;

import java.io.FileInputStream;

import java.io.FileOutputStream;

import java.io.IOException;

import java.io.ObjectInputStream;

import java.io.ObjectOutputStream;

import java.io.Serializable;

import java.util.ArrayList;

public class Team implements Serializable{

private String name, manager,shortName,address,description;

private int points,winMatches,lossMatches,drawMatches,gamesPlayed;

public Team(String teamName, String teamManager,String shortname,String address,String description) {

this.name=teamName;

this.shortName = shortname;

this.manager= teamManager;

this.address= address;

this.description=description;

points=0;winMatches=0;lossMatches=0;drawMatches=0;gamesPlayed=0;

}

public int getMatchesPlayed() {

return this.gamesPlayed;

}

public int getPoints() {

return this.points;

}

public int winMatches() {

return this.winMatches;

}

public int lossMatches() {

return this.lossMatches;

}

public int drawMatches() {

return this.drawMatches;

}

public void matchWon(int point) {

points+=point;

winMatches++;

gamesPlayed++;

}

public void matchLost(int point) {

points+=point;

lossMatches++;

gamesPlayed++;

}

public void matchDraw(int point) {

points+=point;

drawMatches+=point;

gamesPlayed++;

}

public String getName() {

return this.name;

}

public String getShortName() {

return this.shortName;

}

public String getManager() {

return this.manager;

}

public String getAddress() {

return this.address;

}

public String getDescription() {

return this.description;

}

public void setName(String name) {

this.name=name;

}

public void setManager(String manager) {

this.manager=manager;

}

public void setShortName(String shortName) {

this.shortName = shortName;

}

public void setDescription(String desc) {

this.description=desc;

}

public void setAddress(String addresss) {

this.address=address;

}

public String toString() {

return this.name;

}

public static ArrayList<Team> readTeams() throws IOException, ClassNotFoundException{

FileInputStream fis = new FileInputStream(new File("teams\_data.dat"));

ObjectInputStream ois = new ObjectInputStream(fis);

return (ArrayList<Team>)ois.readObject();

}

public static String[][] toTwoDim() throws ClassNotFoundException, IOException{

ArrayList<Team> teams= readTeams();

String[][] arrTeams = new String[teams.size()][6];

int i=0;

for(Team t:teams) {

arrTeams[i][0]=t.name;

arrTeams[i][1]=t.manager;

arrTeams[i][2]=t.shortName;

arrTeams[i][3]=t.address;

arrTeams[i][4]=t.description;

i++;

}

return arrTeams;

}

}

## League

package league;

import java.io.EOFException;

import java.io.File;

import java.io.FileInputStream;

import java.io.FileNotFoundException;

import java.io.FileOutputStream;

import java.io.IOException;

import java.io.ObjectInputStream;

import java.io.ObjectOutputStream;

import java.io.Serializable;

import java.util.ArrayList;

public class League implements Serializable{

private int noOfTeams;

private String name;

private ArrayList<Team> teams;

private boolean aggregateSys; //true for YES

private String country;

private int winPoints,lossPoints,drawPoints;

public League(String leagueName, int noOfTeams,boolean aggregateSys,String country) {

this.name=leagueName;

this.noOfTeams=noOfTeams;

teams=new ArrayList<Team>();

this.aggregateSys=aggregateSys;

this.country=country;

//default worldwide

this.winPoints=3;

this.lossPoints=0;

this.drawPoints=1;

}

public void setPointsThreshold(int win,int loss,int draw) {

this.winPoints=win;

this.lossPoints = loss;

this.drawPoints=draw;

}

public void setWinPoints(int points) {

this.winPoints=points;

}

public void setLossPoints(int points) {

this.lossPoints=points;

}

public void setDrawPoints(int points) {

this.drawPoints=points;

}

public void setTeams(ArrayList<Team> teams) {

this.teams=teams;

}

public void setName(String name) {

this.name=name;

}

public void setNumberOfTeams(int no) {

this.noOfTeams=no;

}

public void addTeam(Team team) {

if(noOfTeams==teams.size()) {

System.out.println("NO MORE SPACE TO ADD");

return;

}

teams.add(team);

}

public void setAggregateSys(boolean cond) {

this.aggregateSys=cond;

}

public void setCountry(String country) {

this.country=country;

}

public String getName() {

return this.name;

}

public int getNoOfTeams() {

return noOfTeams;

}

public String getCountry() {

return this.country;

}

public Team getTeam(int index) {

return teams.get(index);

}

public int getWinPoints() {

return this.getWinPoints();

}

public int getLossPoints() {

return this.lossPoints;

}

public int getDrawPoints() {

return this.drawPoints;

}

public boolean getAggregateSys() {

return this.aggregateSys;

}

public String[][] toTwoDimLeag() throws ClassNotFoundException, IOException{

String[][] arrTeams = new String[teams.size()][6];

int i=0;

for(Team t:teams) {

arrTeams[i][0]=t.getName();

arrTeams[i][1]=String.valueOf(t.getMatchesPlayed());

arrTeams[i][2]=String.valueOf(t.getPoints());

arrTeams[i][3]=String.valueOf(t.winMatches());

arrTeams[i][4]=String.valueOf(t.lossMatches());

arrTeams[i][5]=String.valueOf(t.drawMatches());

i++;

}

return arrTeams;

}

public static String[][] toTwoDim() throws ClassNotFoundException, IOException{

ArrayList<League> league= readFile();

String[][] arrTeams = new String[league.size()][4];

int i=0;

for(League l:league) {

arrTeams[i][0]=l.name;

arrTeams[i][1]=String.valueOf(l.noOfTeams);

arrTeams[i][2]=String.valueOf(l.aggregateSys);

arrTeams[i][3]=l.country;

i++;

}

return arrTeams;

}

public static ArrayList<League> readFile() throws IOException {

ArrayList<League> data;

File file = new File("league\_data.dat");

if(file.createNewFile()) {

System.out.println("NoData\_File Created!");

}

FileInputStream fis= new FileInputStream(file);

ObjectInputStream ois=new ObjectInputStream(fis);

try {

data=(ArrayList<League>)ois.readObject();

}

catch(Exception e) {

System.out.println("No data Exists");

data=new ArrayList<League>();

}

ois.close();fis.close();

return data;

}

public static void writeToFile(League obj) throws IOException, ClassNotFoundException {

ArrayList<League> data = readFile();

File file = new File("league\_data.dat");

FileOutputStream fos = new FileOutputStream(file);

ObjectOutputStream oos = new ObjectOutputStream(fos);

data.add(obj);

oos.writeObject(data);

oos.close();

fos.close();

}

public static void removeLeague(int index) throws IOException {

ArrayList<League> data = readFile();

File file = new File("league\_data.dat");

FileOutputStream fos = new FileOutputStream(file);

ObjectOutputStream oos = new ObjectOutputStream(fos);

data.remove(index);

oos.writeObject(data);

oos.close();

fos.close();

}

}

## Controller

package league;

import java.awt.BorderLayout;

import java.awt.Graphics;

import java.awt.event.ActionEvent;

import java.awt.event.ActionListener;

import java.awt.event.MouseEvent;

import java.awt.event.MouseListener;

import java.io.IOException;

import java.util.Stack;

import javax.swing.JButton;

import javax.swing.JFrame;

import javax.swing.JPanel;

import javax.swing.JScrollPane;

import javax.swing.JTable;

import javax.swing.table.DefaultTableModel;

public class Controller extends JFrame {

LoginPanel loginPanel;

AdminPanel adminPanel;

LeaguePanel leaguePanel;

CreateLeaguePanel createLeaguePanel;

ViewLeaguePanel viewLeaguePanel;

EditLeaguePanel editLeaguePanel;

JButton back;

Stack<JPanel> backStack; //for back operations going to back

public Controller() throws ClassNotFoundException, IOException {

super("Football League Management System");

back=new JButton("BACK");

back.setBounds(20,20,120,40);

backStack = new Stack<JPanel>();

back.addActionListener(new BackController());

setLayout(null);

setSize(1600,1000);

loginPanel=new LoginPanel();

loginPanel.addActionListener(new LoginController());

add(loginPanel);

adminPanel=new AdminPanel();

adminPanel.addActionListener(new AdminController());

leaguePanel=new LeaguePanel();

leaguePanel.addActionListener(new LeagueController());

createLeaguePanel = new CreateLeaguePanel();

createLeaguePanel.addActionListener(new CreateLeagueController());

viewLeaguePanel=new ViewLeaguePanel();

viewLeaguePanel.getTeamTable().addMouseListener(new ViewLeagueController());

// editLeaguePanel=

setBoundsAll();

setVisible(true);

setResizable(false);

setDefaultCloseOperation(EXIT\_ON\_CLOSE);

}

public class EditLeagueController implements ActionListener{

public void actionPerformed(ActionEvent e) {

String cmd = e.getActionCommand();

if(cmd.equals("Delete")) {

try {

getContentPane().removeAll();

back.repaint();

add(back);

editLeaguePanel.deleteLeague();

editLeaguePanel=new EditLeaguePanel();

editLeaguePanel.setBounds(0, 0, 1600, 1000);

add(editLeaguePanel);

editLeaguePanel.repaint();

validate();

} catch (IOException e1) {

System.out.println("No League Selected");

} catch (ClassNotFoundException e1) {

// TODO Auto-generated catch block

System.out.println("No Such Panels Exists");

}

}

else {//edit league

getContentPane().removeAll();

JPanel specTable = editLeaguePanel.getSpecTable();

specTable.setBounds(0,0,1600,1000);

add(specTable);

add(back);

backStack.push(editLeaguePanel);

specTable.repaint();

validate();

}

}

}

public class BackController implements ActionListener{

@Override

public void actionPerformed(ActionEvent e) {

JPanel backPanel = backStack.pop();

//backPanel.setBounds(0, 0, 1600, 1000);

getContentPane().removeAll();

if(!backPanel.equals(loginPanel)) {

add(back);

back.repaint();

}

add(backPanel);

backPanel.repaint();

}

}

public void setBoundsAll() {

loginPanel.setBounds(0, 0, 1600, 1000);

adminPanel.setBounds(0, 0, 1600, 1000);

leaguePanel.setBounds(0, 0, 1600, 1000);

createLeaguePanel.setBounds(0, 0, 1600, 1000);

viewLeaguePanel.setBounds(0, 0, 1600, 1000);

}

public class LoginController implements ActionListener{

public void actionPerformed(ActionEvent e) {

String cmd = e.getActionCommand();

if(loginPanel.getAdminBtn().isSelected() && cmd.equals("login")) {//means is admin login

String un= loginPanel.getUsernameField().getText();

String pwd=loginPanel.getPasswordField().getText();

if(un.equals("admin") && pwd.equals("admin") ) {

//login

loginPanel.getErr().setVisible(false);

System.out.println("Admin Logged In! ");

getContentPane().removeAll();

add(back);

add(adminPanel);

backStack.push(loginPanel);

validate();

repaint();

}

else {

loginPanel.getErr().setVisible(true);

}

}

else {//user

}

if(!loginPanel.getAdminBtn().isSelected() && cmd.equals("login")){

//login in to user panel

loginPanel.getErr().setVisible(false);

getContentPane().removeAll();

add(back);

try {

viewLeaguePanel=new ViewLeaguePanel();

viewLeaguePanel.setBounds(0, 0, 1600, 1000);

viewLeaguePanel.getTeamTable().addMouseListener(new ViewLeagueController());

} catch (ClassNotFoundException | IOException e1) {

// TODO Auto-generated catch block

e1.printStackTrace();

}

add(viewLeaguePanel);

backStack.push(loginPanel);

viewLeaguePanel.repaint();

validate();

}

if(!loginPanel.getAdminBtn().isSelected()) {

loginPanel.getUsernameField().setVisible(false);

loginPanel.getPasswordField().setVisible(false);

loginPanel.getErr().setVisible(false);

loginPanel.getLoginBtn().setBounds(1325,500,100,100);

loginPanel.repaint();

}

if(loginPanel.getAdminBtn().isSelected()) {

loginPanel.getUsernameField().setVisible(true);

loginPanel.getPasswordField().setVisible(true);

loginPanel.getLoginBtn().setBounds(1325,670,100,100);

loginPanel.repaint();

}

}

}

public class AdminController implements ActionListener{

@Override

public void actionPerformed(ActionEvent e) {

String cmd = e.getActionCommand();

if(cmd.equals("League")) {

getContentPane().removeAll();

add(back);

add(leaguePanel);

backStack.push(adminPanel);

leaguePanel.repaint();

validate();

}

else if(cmd.equals("Team")){

}

else if(cmd.equals("Player")) {

}

}

}

public class LeagueController implements ActionListener{

public void actionPerformed(ActionEvent e) {

String cmd = e.getActionCommand();

if(cmd.equals("Create New League")) {

getContentPane().removeAll();

try {

createLeaguePanel=new CreateLeaguePanel();

} catch (ClassNotFoundException | IOException e1) {

// TODO Auto-generated catch block

System.out.println("Create New League Panel ERROR ");

}

createLeaguePanel.setBounds(0,0,1600,1000);

createLeaguePanel.addActionListener(new CreateLeagueController());

add(createLeaguePanel);

add(back);

backStack.push(leaguePanel);

createLeaguePanel.repaint();

validate();

}

else if(cmd.equals("Edit League")){

getContentPane().removeAll();

try {

editLeaguePanel = new EditLeaguePanel();

} catch (ClassNotFoundException | IOException e1) {

// TODO Auto-generated catch block

System.out.println("Can't Create Edit League Panel");

}

editLeaguePanel.addActionListener(new EditLeagueController());

editLeaguePanel.setBounds(0,0,1600,1000);

add(back);

add(editLeaguePanel);

backStack.push(leaguePanel);

editLeaguePanel.repaint();

validate();

}

else if(cmd.equals("View League")) {

getContentPane().removeAll();

add(back);

try {

viewLeaguePanel=new ViewLeaguePanel();

viewLeaguePanel.setBounds(0, 0, 1600, 1000);

viewLeaguePanel.getTeamTable().addMouseListener(new ViewLeagueController());

} catch (ClassNotFoundException | IOException e1) {

// TODO Auto-generated catch block

e1.printStackTrace();

}

add(viewLeaguePanel);

backStack.push(leaguePanel);

viewLeaguePanel.repaint();

validate();

}

}

}

public class CreateLeagueController implements ActionListener{

League leag;

public void actionPerformed(ActionEvent e) {

String cmd = e.getActionCommand();

if(cmd.equals("Save") && createLeaguePanel.getSelectedTeams().size()==createLeaguePanel.getNoOfTeams()) {

leag= new League(createLeaguePanel.getName(),

createLeaguePanel.getNoOfTeams(),

createLeaguePanel.getAggregateSys(),

createLeaguePanel.getCountry());

leag.setPointsThreshold(createLeaguePanel.getWinPoints(),

createLeaguePanel.getLossPoints(),

createLeaguePanel.getDrawPoints());

leag.setTeams(createLeaguePanel.getSelectedTeams());

try {

League.writeToFile(leag);

} catch (ClassNotFoundException e1) {

// TODO Auto-generated catch block

e1.printStackTrace();

} catch (IOException e1) {

// TODO Auto-generated catch block

e1.printStackTrace();

}

getContentPane().removeAll();

createLeaguePanel.setVisible(false);

try {

createLeaguePanel=new CreateLeaguePanel();

createLeaguePanel.addActionListener(new CreateLeagueController());

} catch (ClassNotFoundException | IOException e1) {

// TODO Auto-generated catch block

e1.printStackTrace();

}

System.out.println("Created a League");

add(leaguePanel);

leaguePanel.repaint();

add(back);

validate();

}

else {

System.out.println("Teams Missing");

}

}

}

public class CreateLeagueController implements ActionListener{

League leag;

public void actionPerformed(ActionEvent e) {

String cmd = e.getActionCommand();

if(cmd.equals("Save") && createLeaguePanel.getSelectedTeams().size()==createLeaguePanel.getNoOfTeams()) {

leag= new League(createLeaguePanel.getName(),

createLeaguePanel.getNoOfTeams(),

createLeaguePanel.getAggregateSys(),

createLeaguePanel.getCountry());

leag.setPointsThreshold(createLeaguePanel.getWinPoints(),

createLeaguePanel.getLossPoints(),

createLeaguePanel.getDrawPoints());

leag.setTeams(createLeaguePanel.getSelectedTeams());

try {

League.writeToFile(leag);

} catch (ClassNotFoundException e1) {

// TODO Auto-generated catch block

e1.printStackTrace();

} catch (IOException e1) {

// TODO Auto-generated catch block

e1.printStackTrace();

}

getContentPane().removeAll();

createLeaguePanel.setVisible(false);

try {

createLeaguePanel=new CreateLeaguePanel();

createLeaguePanel.addActionListener(new CreateLeagueController());

} catch (ClassNotFoundException | IOException e1) {

// TODO Auto-generated catch block

e1.printStackTrace();

}

System.out.println("Created a League");

add(leaguePanel);

leaguePanel.repaint();

add(back);

validate();

}

else {

System.out.println("Teams Missing");

}

}

}

public class ViewLeagueController implements MouseListener{

@Override

public void mouseClicked(MouseEvent e) {

getContentPane().removeAll();

JPanel specTable = viewLeaguePanel.getSpecTable();

add(specTable);

add(back);

backStack.push(viewLeaguePanel);

specTable.repaint();

validate();

}

@Override

public void mousePressed(MouseEvent e) {

// TODO Auto-generated method stub

}

@Override

public void mouseReleased(MouseEvent e) {

// TODO Auto-generated method stub

}

@Override

public void mouseEntered(MouseEvent e) {

// TODO Auto-generated method stub

}

@Override

public void mouseExited(MouseEvent e) {

// TODO Auto-generated method stub

}

}

@Override

public void paintComponents(Graphics g) {

// TODO Auto-generated method stub

super.paintComponents(g);

}

public static void main(String args[]) throws ClassNotFoundException, IOException {

try{

JFrame cntrl = new Controller();

}

catch(Exception ex) {

System.out.println("ERROR");

}

}

}