

## COLLEGE/SCHOOL ATTEDANCE SYSTEM USING JAVA LANGUAGE



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```
import java.awt.*;  
import java.awt.event.*;  
import java.sql.*;  
import javax.swing.*;  
import java.util.*;
```

```
public class attendance extends JFrame implements  
ItemListener, ActionListener  
{
```

```
    private Connection con;  
    private Statement stmt;  
    private ResultSet rs;  
    private ResultSetMetaData rsMeta;  
    String query, dbURL, dbName, title;
```

```
    Container cp;
```

```
    String ref="", rollno="";  
    String[] heads;  
    int[] stChange;  
    String[][] cubeData;  
    int rows, cols, coo;
```

```
    public attendance(String tit, String dbnm, String qry){  
        this.con = null;  
        this.stmt = null;  
        this.rs = null;  
        this.rsMeta=null;  
  
        this.dbName=dbnm;  
        this.query=query;  
        this.title=tit;  
        this.rows=0;  
        this.cols=0;  
        this.coo=0;
```

```

dbURL="jdbc:odbc:Driver={Microsoft Access Driver (*.mdb)};DBQ="+dbName;
cp = getContentPane();

try
{
    Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");
    this.con=DriverManager.getConnection(this.dbURL);
    this.con.setAutoCommit(false);
    this.stmt=this.con.createStatement();

    this.rs=this.stmt.executeQuery(query);           // execute query and get
resultset (rs)

    rsMeta = rs.getMetaData();                     // get rs metadata
    this.cols = rsMeta.getColumnCount();           // get number of columns
    this.coo =this.cols-1;
    while(rs.next()){                               // get rows in resultset
        ++this.rows;
    }

    heads = new String[cols];                       // initialize col heads

    for (int i = 0; i < cols; i++) {                // getting columns heading in heads[]
        int colindex=i+1;                           // column indexes start
from 1

        heads[i] = rsMeta.getColumnName(colindex);
    }

    stChange = new int[rows];                       //to save value when status
changed

    this.rs=this.stmt.executeQuery(query);           // execute query and get
resultset (rs)

    cubeData = new String[rows][cols];             // initialize table data

    int j=0; int k=0;                               // function to get resultset data
    while(rs.next())
    {
        if(j<=rows)
        {
            int h=1;
            if(k<=cols)
            {

```

```

                for(int cc=0; cc<cols; cc++)
                {
                    cubeData[j][k]=rs.getString(h);
                    h++;
                    k++;
                }
            }
            k=0;h=0;
            j++;
        }
    }

```

```

}catch(Exception ex)
{System.err.println(ex.getMessage());
ex.printStackTrace(System.err);
}

```

cp.setLayout(new GridLayout(rows+2,cols)); // 1 additional Row of Col heading, 1 for save btn

//----- Adding heading in CP-----

```

for (int i = 0; i < cols; i++) {
    JLabel jl = new JLabel(" ["+heads[i]+" ] ");
    jl.setOpaque(true);
    jl.setBackground(Color.gray);
    jl.setForeground(Color.white);
    cp.add(jl);
}

```

//----- Adding data -----

```

for(int j=0; j<rows; j++){
    for(int k=0; k<cols; k++)
    {
        if(k==(cols-1))
        {
            ref="-"+j+"."+k;
            String status=cubeData[j][k]+ref;
            stChange[j]=Integer.parseInt(rollNo); // save previously selected
            //
            Choice jc = new Choice();

```

status of each  
row(student) + array address

```
        jc.add("Present"+ref);
        jc.add("Leave"+ref);
        jc.add("Absent"+ref);

        jc.select(status);

        jc.addItemListener(this);
        cp.add(jc);

    }
    else
        cp.add(new JLabel(cubeData[j][k]));
        rollno=cubeData[j][k];
    }
}
addSaveButton();
//-----
setTitle(title);
setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
pack();
setResizable(false);
setVisible(true);

}

//-----SAVE BUTTON-----

public void addSaveButton(){
    JButton saveBtn = new JButton(" ::: Save ::: ");
    saveBtn.addActionListener(this);
    cp.add(saveBtn);
}

//-----Item Listener -----
public void itemStateChanged(ItemEvent ie) {
    String s = (String)ie.getItem();

    String ro = s.substring(s.indexOf("-")+1,s.indexOf("."));
    String co = s.substring(s.indexOf(".")+1,s.length());

    String stats = s.substring(0,s.indexOf("-"));

    int roo = Integer.parseInt(ro);
    coo = Integer.parseInt(co);
```

```
        cubeData[roo][coo]=stats;
    }

    //-----Action Listener-----
    public void actionPerformed(ActionEvent ae){

        try{
            for(int j=0; j<rows; j++)
            {
                String updt = "update students set Status= '"+cubeData[j][coo]+" where
Rollno="+stChange[j];
                this.con=DriverManager.getConnection(this.dbURL);
                this.stmt.executeUpdate(updt);
            }

            this.con.commit();
            System.out.println("Records updated..!");
            con.close();

        }catch(Exception ex)
        {System.err.println(ex.getMessage());
        ex.printStackTrace(System.err);
        }
    }

}

public static void main(String args[])
{
    new attendance("...: Attendance Form ... ", "mydb.mdb", "SELECT * FROM students order by
Rollno");
}

} // ends class m
```