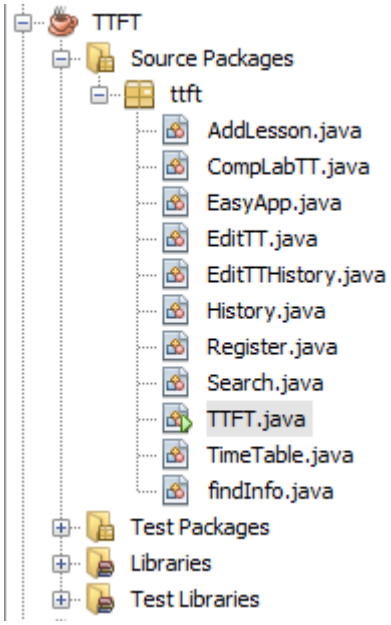
Appendix



Easyapp.java that was used in my program was created by the IB, the class itself was taken from the site **http://ibcomp.fis.edu/Java/EasyApp.html** .
Mulkey, D. (2006). EasyApp - Simplified AWT Controls. Germany.

My program code:

```
1 package ttft;
2
3 /**
4  * Time-Table for Teacher (TTFT)
5  * IDE - NetBeans 7.3.1
6  * @author
7  * date December 2013
8  */
9 import java.awt.*;
10 import java.io.RandomAccessFile;
11 import java.io.IOException;
12
13 public class TTFT extends EasyApp {
14
15    public static void main(String[] args) {
16       new TTFT();
17    }
18    Label Title = addLabel("Login Section", 50, 50, 400, 50, this);
19    Label Login_ = addLabel("Login", 50, 110, 60, 50, this);
```

```
20  TextField T1 = addTextField("", 170, 120, 150, 30, this);
21  Label Password_ = addLabel("Password", 50, 160, 60, 50, this);
22  TextField T2 = addTextField("", 170, 170, 150, 30, this);
23  Button Register = addButton("Register", 50, 225, 130, 40, this);
24  Button Login = addButton("Login", 200, 225, 130, 40, this);
25  Button Exit = addButton("Exit", 230, 280, 100, 40, this);
26  Label CopyRight = addLabel("Europeanschool 2013 ©", 50, 280, 200, 50, this);
27
28  public TTFT() {
29     setTitle("Time-Table for Teachers");
30     setBounds(50, 50, 370, 350);
31     Title.setFont(new Font("Arial", 0, 20));
32     Title.setForeground(Color.blue);
33  }
34
35  public void actions(Object source, String command) {
36     if (source == Register) {
37        RegisterCheck();
38     }
39     if (source == Login) {
40        Login();
41     }
42     if (source == Exit) {
43        System.exit(0);
44     }
45  }
46  static String name;
47  void Login() {
48     try {
49        RandomAccessFile main = new RandomAccessFile("main.txt", "r"); //user name and
                                                                          password will be saved
50        if (main.length() != 0) {
51           String line = main.readLine();
52           name = line.substring(0, line.indexOf("|"));
53           String pass = line.substring(line.indexOf("|") + 1);
54
55           String pass1 = "";
56           for (int i = 0; i < pass.length(); i++) {
57              int k = (int) pass.charAt(i) - 1;
58              pass1 = pass1 + (char) k;
59           }
60
61           if (name.equals(T1.getText()) && pass1.equals(T2.getText())) {
62              new CompLabTT();
63              dispose();
64           } else {
65              outputString("Error!\n" + "Login or password is incorrect!");
66           }
67        } else {
68           outputString("Please, register at first!");
69        }
70     } catch (IOException e) {
71        e.getMessage();
72     }
73  }
```

```
74
75    void RegisterCheck() {
76        try {
77            RandomAccessFile main = new RandomAccessFile("main.txt", "rw");
78            if (main.length() == 0) {
79                new Register();
80            } else {
81                outputString("You are already registered!\n" + "Please, try to Login!");
82            }
83        } catch (IOException e) {
84            e.getMessage();
85        }
86    }
87 }
```

```
1 package ttft;
2 import java.awt.*;
3 import java.io.RandomAccessFile;
4 import java.io.IOException;
5
6 public class AddLesson extends EasyApp {
7
8    Label Title = addLabel("Add a Lesson Section", 40, 40, 400, 50, this);
9    Label TeacherL = addLabel("Teacher", 50, 100, 80, 30, this);
10    Label SubjectL = addLabel("Subject", 50, 140, 80, 30, this);
11    Label DayL = addLabel("Day", 50, 180, 80, 30, this);
12    Label PeriodL = addLabel("Period", 50, 220, 80, 30, this);
13    Label GradeL = addLabel("Grade", 50, 260, 80, 30, this);
14    TextField Teacher = addTextField("", 170, 100, 150, 30, this);
15    TextField Subject = addTextField("", 170, 140, 150, 30, this);
16    TextField Day = addTextField("", 170, 180, 150, 30, this);
17    TextField Period = addTextField("", 170, 220, 150, 30, this);
18    TextField Grade = addTextField("", 170, 260, 150, 30, this);
19    Button TimeTable = addButton("Time-Table", 40, 310, 100, 50, this);
20    Button Accept = addButton("Accept", 160, 310, 100, 50, this);
21    Button Exit = addButton("Exit", 280, 310, 100, 50, this);
22
23    public AddLesson() {
24       setTitle("CompLab Time-table");
25       setBounds(425, 78, 440, 390);
26       Title.setFont(new Font("Arial", 0, 20));
27       Title.setForeground(Color.blue);
28    }
29
30    public void actions(Object source, String command) {
31       if (source == TimeTable) {
32          new TimeTable();
33       }
34       if (source == Accept) {
35          Accept();
36       }
37       if (source == Exit) {
38          System.exit(0);
39       }
40    }
41    // methods description
42    void Accept() {
43       String teacher = Teacher.getText();
44       String subject = Subject.getText();
45       String day = Day.getText();
46       String period = Period.getText();
47       String grade = Grade.getText();
48       if (teacher.equals("") || subject.equals("") || day.equals("") || period.equals("") ||
                                 grade.equals("")) {
49          outputString("Error!\n" + "fill in all fields!");
50
51       } else {
52          String record = teacher + "/" + subject + "/" + day + "/" + period + "/" + grade;
53          try {
```

```
54              RandomAccessFile timetable = new RandomAccessFile("timetable.txt", "rw"); //file to
                                        save all information as an records
55              int length = (int) timetable.length();
56              if (length == 0) {
57                 timetable.writeBytes(TTFT.name + "'s room TimeTable\n");
58                 timetable.writeBytes("\n");
59              } else {
60                 timetable.seek(length);
61              }
62              System.out.println(record);
63              timetable.writeBytes(record + "\n");
64           } catch (IOException e) {
65              e.getMessage();
66           }
67          //clean all fileds after accepting all data
68        Teacher.setText("");
69        Subject.setText("");
70        Day.setText("");
71        Period.setText("");
72        Grade.setText("");
73        }
74    }
75 }
```

```
1 package ttft;
2 import java.awt.*;
3 public class CompLabTT extends EasyApp {
4
5    Button TimeTable = addButton("Time-Table", 50, 50, 130, 50, this);
6    Button AddLesson = addButton("Add a Lesson", 200, 50, 130, 50, this);
7    Button Search = addButton("Search", 125, 115, 130, 50, this);
8    Button Exit = addButton("Exit", 240, 190, 100, 50, this);
9
10    public CompLabTT() {
11       setTitle("CompLab Time-table");
12       setBounds(400, 80, 380, 260);
13    }
14
15    public void actions(Object source, String command) {
16       if (source == TimeTable) {
17          new TimeTable();
18       }
19       if (source == AddLesson) {
20          new AddLesson();
21       }
22       if (source == Search) {
23          new Search();
24       }
25       if (source == Exit) {
26          System.exit(0);
27       }
28    }
29 }
```

```
 1 package ttft;
 2 import java.awt.*;
 3 import java.io.RandomAccessFile;
 4 import java.io.IOException;
 5
 6 public class EditTT extends EasyApp {
 7
 8    Label Title = addLabel("Time-Table Editor", 40, 40, 400, 50, this);
 9    Label TeacherL = addLabel("Teacher", 50, 100, 80, 30, this);
10     Label SubjectL = addLabel("Subject", 50, 140, 80, 30, this);
11     Label DayL = addLabel("Day", 50, 180, 80, 30, this);
12     Label PeriodL = addLabel("Period", 50, 220, 80, 30, this);
13     Label GradeL = addLabel("Grade", 50, 260, 80, 30, this);
14     TextField Teacher = addTextField("", 170, 100, 150, 30, this);
15     TextField Subject = addTextField("", 170, 140, 150, 30, this);
16     TextField Day = addTextField("", 170, 180, 150, 30, this);
17     TextField Period = addTextField("", 170, 220, 150, 30, this);
18     TextField Grade = addTextField("", 170, 260, 150, 30, this);
19     Button Accept = addButton("Accept", 85, 310, 100, 50, this);
20     Button Exit = addButton("Exit", 220, 310, 100, 50, this);
21
22     public EditTT() {
23
24        setTitle("Edit Time-Table");
25        setBounds(425, 78, 350, 390);
26        Title.setFont(new Font("Arial", 0, 20));
27        Title.setForeground(Color.blue);
28        buttonInfo();
29     }
30
31     public void actions(Object source, String command) {
32
33        if (source == Accept) {
34           Accept();
35        }
36        if (source == Exit) {
37           System.exit(0);
38        }
39     }
40     String button = TimeTable.check[TimeTable.i][TimeTable.j];
41     int z;
42
43     void buttonInfo() {
44
45        z = 0;
46        String day;
47        if (TimeTable.j == 0) {
48           day = "Monday";
49        } else if (TimeTable.j == 1) {
50           day = "Tuesday";
51        } else if (TimeTable.j == 2) {
52           day = "Wednesday";
53        } else if (TimeTable.j == 3) {
54           day = "Thursday";
55        } else {
```

```
56          day = "Friday";
57      }
58
59      String period = "" + (TimeTable.i + 1);
60      if (button != null) {
61          // button is not empty
62          while (z < TimeTable.count) {
63   if (TimeTable.LessonInfo[z][2].equals(day) && TimeTable.LessonInfo[z][3].equals(period)) {
64                  Teacher.setText(TimeTable.LessonInfo[z][0]);
65                  Subject.setText(TimeTable.LessonInfo[z][1]);
66                  Day.setText(TimeTable.LessonInfo[z][2]);
67                  Period.setText(TimeTable.LessonInfo[z][3]);
68                  Grade.setText(TimeTable.LessonInfo[z][4]);
69                  HistoryOfActions();
70                  Edit();
71                  break;
72              }
73              z++;
74          }
75      } else {
76          Day.setText(day);
77          Period.setText(period);
78      }
79  }
80
81  void HistoryOfActions() {
82
83      try {
84          RandomAccessFile OldInfo = new RandomAccessFile("History.txt", "rw");
85          OldInfo.seek(OldInfo.length());
86          OldInfo.writeBytes(TimeTable.LessonInfo[z][0] + "/" + TimeTable.LessonInfo[z][1] + "/"
+ TimeTable.LessonInfo[z][2] + "/" + TimeTable.LessonInfo[z][3] + "/"
+TimeTable.LessonInfo[z][4] + "\n");
87
88      } catch (IOException e) {
89          e.getMessage();
90      }
91      }
92       //if Button is empty - Accept() method works as input new lesson
93      //if Button is already accepted - client should change information and then save
94      // thus, change = delete + accept
95     void Accept () {
96          String teacher = Teacher.getText();
97          String subject = Subject.getText();
98          String day = Day.getText();
99          String period = Period.getText();
100          String grade = Grade.getText();
101          if (teacher.equals("") || subject.equals("") || day.equals("") || period.equals("") ||
                        grade.equals("")) {
102              outputString("Error!\n" + "fill in all fields!");
103
104          } else {
105              String record = teacher + "/" + subject + "/" + day + "/" + period + "/" + grade;
106              try {
```

```
107                 RandomAccessFile timetable = new RandomAccessFile("timetable.txt", "rw"); //file
                        to save all information as an records
108                 int length = (int) timetable.length();
109                 if (length == 0) {
110                     timetable.writeBytes(TTFT.name + "'s room TimeTable\n");
111                     timetable.writeBytes("\n");
112                 } else {
113                     timetable.seek(length);
114                 }
115                 timetable.writeBytes(record + "\n");
116             } catch (IOException e) {
117                 e.getMessage();
118             }
119         }
120         //clean all fileds after accepting all data
121         Teacher.setText("");
122         Subject.setText("");
123         Day.setText("");
124         Period.setText("");
125         Grade.setText("");
126     }
127 
128     void Edit() {
129     //delete the record and accept changies
130     try {
131             RandomAccessFile newTT = new RandomAccessFile("timetable.txt", "rw"); //delete
                line from file
132             newTT.setLength(0);
133             newTT.writeBytes(TTFT.name + "'s room TimeTable\n");
134             newTT.writeBytes("\n");
135             int i = 0;
136             while (i < TimeTable.count) {
137                 if (i != z) {
138                     String record = TimeTable.LessonInfo[i][0] + "/" + TimeTable.LessonInfo[i][1] +
                    "/" + TimeTable.LessonInfo[i][2] + "/" + TimeTable.LessonInfo[i][3] + "/" +
                    TimeTable.LessonInfo[i][4];
139                     newTT.writeBytes(record + "\n");
140                 }
141                 i++;
142             }
143 
144             TimeTable.check[TimeTable.i][TimeTable.j] = null;
145 // error!!!!!!! TimeTable.Lessons[TimeTable.i][TimeTable.j] = addButton("", 160 + TimeTable.j
            * 120, 145 + TimeTable.i * 50, 120, 50, this);
146         } catch (IOException e) {
147             e.getMessage();
148         }
149     }
150 }
```

```
1 package ttft;
2 import java.awt.*;
3 import java.io.RandomAccessFile;
4 import java.io.IOException;
5
6 public class EditTTHistory extends EasyApp {
7    Label Title = addLabel("Time-Table Editor", 40, 40, 400, 50, this);
8    Label TeacherL = addLabel("Teacher", 50, 100, 80, 30, this);
9    Label SubjectL = addLabel("Subject", 50, 140, 80, 30, this);
10    Label DayL = addLabel("Day", 50, 180, 80, 30, this);
11    Label PeriodL = addLabel("Period", 50, 220, 80, 30, this);
12    Label GradeL = addLabel("Grade", 50, 260, 80, 30, this);
13    TextField Teacher = addTextField(History.name, 170, 100, 150, 30, this);
14    TextField Subject = addTextField(History.subject, 170, 140, 150, 30, this);
15    TextField Day = addTextField(History.day, 170, 180, 150, 30, this);
16    TextField Period = addTextField(History.lesson, 170, 220, 150, 30, this);
17    TextField Grade = addTextField(History.grade, 170, 260, 150, 30, this);
18    Button Accept = addButton("Accept", 85, 310, 100, 50, this);
19    Button Exit = addButton("Exit", 220, 310, 100, 50, this);
20
21    public EditTTHistory() {
22       setTitle("Edit Time-Table");
23       setBounds(425, 78, 350, 390);
24       Title.setFont(new Font("Arial", 0, 20));
25       Title.setForeground(Color.blue);
26       }
27
28    public void actions(Object source, String command) {
29
30       if (source == Accept) {
31          Accept();
32       }
33       if (source == Exit) {
34          System.exit(0);
35       }
36    }
37
38    void Accept () {
39          String teacher = Teacher.getText();
40          String subject = Subject.getText();
41          String day = Day.getText();
42          String period = Period.getText();
43          String grade = Grade.getText();
44          if (teacher.equals("") || subject.equals("") || day.equals("") || period.equals("") ||
                grade.equals("")) {
45             outputString("Error!\n" + "fill in all fields!");
46
47          } else {
48             String record = teacher + "/" + subject + "/" + day + "/" + period + "/" + grade;
49             try {
50                RandomAccessFile timetable = new RandomAccessFile("timetable.txt", "rw"); //file
                   to save all information as an records
51                int length = (int) timetable.length();
52                if (length == 0) {
53                   timetable.writeBytes(TTFT.name + "'s room TimeTable\n");
```

```
54                  timetable.writeBytes("\n");
55              } else {
56                  timetable.seek(length);
57              }
58              timetable.writeBytes(record + "\n");
59          } catch (IOException e) {
60              e.getMessage();
61          }
62      }
63      //clean all fileds after accepting all data
64      Teacher.setText("");
65      Subject.setText("");
66      Day.setText("");
67      Period.setText("");
68      Grade.setText("");
69  }
70 }
```

```
1 package ttft;
2 import java.awt.*;
3 import java.io.RandomAccessFile;
4 import java.io.IOException;
5
6 public class History extends EasyApp {
7
8    Label Title = addLabel("Changes made in the timetable", 50, 50, 400, 40, this);
9    Button Exit = addButton("Exit", 240, 270, 80, 40, this);
10    Button Edit = addButton("Edit", 100, 270, 110, 40, this);
11    List HistoryA = addList("", 50, 100, 290, 150, this);
12
13    public History() {
14       setTitle("History of Actions");
15       setBounds(400, 80, 390, 330);
16       Title.setFont(new Font("Arial", 0, 15));
17       Title.setForeground(Color.blue);
18       ShowHistory();
19    }
20
21    public void actions(Object source, String command) {
22       if (source == Exit) {
23          System.exit(0);
24       }
25       if (source == Edit) {
26          Edit();
27       }
28    }
29
30    void ShowHistory() {
31       String text; // to read records from History.txt file
32       HistoryA.removeAll();
33       try {
34          RandomAccessFile OldInfo = new RandomAccessFile("History.txt", "rw");
35          while (OldInfo.getFilePointer() != OldInfo.length()) {
36             text = OldInfo.readLine();
37             HistoryA.add(text + "\n");
38          }
39       } catch (IOException e) {
40          e.getMessage();
41       }
42    }
43    static String name;
44    static String subject;
45    static String day;
46    static String lesson;
47    static String grade;
48
49    void Edit() {
50       String text = HistoryA.getSelectedItem();
51       int index1 = text.indexOf("/");
52       int index2 = text.indexOf("/", index1 + 1);
53       int index3 = text.indexOf("/", index2 + 1);
54       int index4 = text.indexOf("/", index3 + 1);
55
```

```
56          name = text.substring(0, index1);
57          subject = text.substring(index1 + 1, index2);
58          day = text.substring(index2 + 1, index3);
59          lesson = text.substring(index3 + 1, index4);
60          grade = text.substring(index4 + 1);
61
62          new EditTTHistory();
63      }
64  }
```

```
1 package ttft;
2 import java.awt.*;
3 import java.io.RandomAccessFile;
4 import java.io.IOException;
5
6 public class Register extends EasyApp {
7
8    Label Title = addLabel("Register Section", 50, 50, 400, 50, this);
9    Label Login_ = addLabel("Login", 50, 110, 60, 50, this);
10    TextField T1 = addTextField("", 170, 120, 150, 30, this);
11    Label Password_ = addLabel("Password", 50, 160, 60, 50, this);
12    TextField T2 = addTextField("", 170, 170, 150, 30, this);
13    Button Create = addButton("Create", 50, 225, 130, 40, this);
14    Button Exit = addButton("Exit", 200, 225, 130, 40, this);
15
16    public Register() {
17
18       setTitle("Time-Table for Teachers");
19       setBounds(425, 78, 370, 320);
20       Title.setFont(new Font("Arial", 0, 20));
21       Title.setForeground(Color.blue);
22    }
23
24    public void actions(Object source, String command) {
25       if (source == Create) {
26          Create();
27       }
28       if (source == Exit) {
29          System.exit(0);
30       }
31    }
32
33    void Create() {
34       String login = T1.getText();
35       String password = T2.getText();
36       String passwordNew = "";
37       try {
38          RandomAccessFile main = new RandomAccessFile("main.txt", "rw");
39          for (int i = 0; i < password.length(); i++) {
40             int k = (int) password.charAt(i) + 1;
41             passwordNew = passwordNew + (char) k;
42          }
43          main.writeBytes(login + "|" + passwordNew + "\n");
44
45       } catch (IOException e) {
46          e.getMessage();
47       }
48       dispose();
49    }
50 }
```

```
1 package ttft;
2
3 import java.awt.*;
4
5 public class Search extends EasyApp {
6
7    Button ByDay = addButton("By Day", 150, 110, 90, 40, this);
8    Button ByClass = addButton("By Class", 50, 160, 90, 40, this);
9    Button ByTeacher = addButton("By Teacher", 50, 110, 90, 40, this);
10    Button BySubject = addButton("By Subject", 150, 160, 90, 40, this);
11    Button History = addButton("History of actions", 50, 220, 190, 40, this);
12    Button Exit = addButton("Exit", 280, 220, 70, 40, this);
13    TextField SearchText = addTextField("", 50, 60, 190, 30, this);
14
15    public Search() {
16       setTitle("Search");
17       setBounds(400, 80, 390, 280);
18    }
19    static String text;
20    static int index;
21    public void actions(Object source, String command) {
22
23       text = SearchText.getText();
24
25       if (source == ByDay) {
26          index = 2;
27          new findInfo();
28       }
29       if (source == ByClass) {
30          index = 4;
31          new findInfo();
32       }
33       if (source == ByTeacher) {
34          index = 0;
35          new findInfo();
36       }
37       if (source == BySubject) {
38          index = 1;
39          new findInfo();
40       }
41       if (source == History) {
42          new History();
43       }
44       if (source == Exit) {
45          System.exit(0);
46       }
47    }
48 }
```

```
 1 package ttft;
 2
 3 import java.awt.*;
 4 import java.io.RandomAccessFile;
 5 import java.io.IOException;
 6
 7 public class TimeTable extends EasyApp {
 8
 9    Label Title = addLabel("Computer Lab Time-Table", 40, 40, 400, 50, this);
10     Button Exit = addButton("Exit", 660, 610, 100, 40, this);
11     Label Lesson = addLabel("Lesson | Time", 40, 100, 120, 40, this);
12     Label Lesson1 = addLabel("  1 | 09:00-09:45", 40, 150, 120, 40, this);
13     Label Lesson2 = addLabel("  2 | 09:50-10:35", 40, 200, 120, 40, this);
14     Label Lesson3 = addLabel("  3 | 10:45-11:30", 40, 250, 120, 40, this);
15     Label Lesson4 = addLabel("  4 | 11:35-12:20", 40, 300, 120, 40, this);
16     Label Lesson5 = addLabel("  5 | 12:50-13:35", 40, 350, 120, 40, this);
17     Label Lesson6 = addLabel("  6 | 13:40-14:25", 40, 400, 120, 40, this);
18     Label Lesson7 = addLabel("  7 | 14:30-15:15", 40, 450, 120, 40, this);
19     Label Lesson8 = addLabel("  8 | 15:20-16:05", 40, 500, 120, 40, this);
20     Label Lesson9 = addLabel("  9 | 16:10-16:55", 40, 550, 120, 40, this);
21     Label Monday = addLabel("Monday", 185, 100, 120, 40, this);
22     Label Tuesday = addLabel("Tuesday", 305, 100, 110, 40, this);
23     Label Wednesday = addLabel("Wednesday", 420, 100, 120, 40, this);
24     Label Thursday = addLabel("Thursday", 545, 100, 120, 40, this);
25     Label Friday = addLabel("Friday", 665, 100, 120, 40, this);
26     static Button[][] Lessons = new Button[9][5];
27
28     public TimeTable() {
29
30         setTitle("CompLab Time-table");
31         setBounds(20, 20, 800, 670);
32         Title.setFont(new Font("Arial", 0, 20));
33         Title.setForeground(Color.blue);
34         Monday.setFont(new Font("Arial", 0, 15));
35         Monday.setForeground(Color.blue);
36         Tuesday.setFont(new Font("Arial", 0, 15));
37         Tuesday.setForeground(Color.blue);
38         Wednesday.setFont(new Font("Arial", 0, 15));
39         Wednesday.setForeground(Color.blue);
40         Thursday.setFont(new Font("Arial", 0, 15));
41         Thursday.setForeground(Color.blue);
42         Friday.setFont(new Font("Arial", 0, 15));
43         Friday.setForeground(Color.blue);
44         Lesson.setFont(new Font("Arial", 0, 15));
45         Lesson.setForeground(Color.blue);
46         createButtons();
47     }
48     static int i;  //Horizontal coordinate
49     static int j; //Vertical coordinate
50     static String[][] LessonInfo = new String[45][5];  // lessons max number is 9 * 5 = 45
51     static String[][] check = new String[9][5];
52
53     public void actions(Object source, String command) {
54         if (source == Exit) {
55             System.exit(0);
```

```
56      }
57      for (i = 0; i < 9; i++) {
58          for (j = 0; j < 5; j++) {
59              if (source == Lessons[i][j]) {
60                  new EditTT();
61                  dispose();
62              }
63          }
64      }
65  }
66  String lessonName = "";  //what to write on the button
67  static int count; // how many registered lessons we have in the "timetable.txt" file
68
69  static void createArray() {
70      String line;
71      //read information from file:
72      //Teacher's name, subject, day, period, grade.
73      try {
74          count = 0;
75          int index1;
76          int index2;
77          RandomAccessFile timetable = new RandomAccessFile("timetable.txt", "rw");
78          timetable.readLine();  //  List title
79          timetable.readLine();   //empty line
80          // read lines from file and puts in the 2D array
81          while (timetable.length() != timetable.getFilePointer()) {
82              index1 = 0;
83              line = timetable.readLine();
84              index2 = line.indexOf("/");
85              LessonInfo[count][0] = line.substring(index1, index2);
86              index1 = index2;
87              index2 = line.indexOf("/", index1 + 1);
88              LessonInfo[count][1] = line.substring(index1 + 1, index2);
89              index1 = index2;
90              index2 = line.indexOf("/", index1 + 1);
91              LessonInfo[count][2] = line.substring(index1 + 1, index2);
92              index1 = index2;
93              index2 = line.indexOf("/", index1 + 1);
94              LessonInfo[count][3] = line.substring(index1 + 1, index2);
95              index1 = index2;
96              LessonInfo[count][4] = line.substring(index1 + 1);
97              count++;
98          }
99      } catch (IOException e) {
100         e.getMessage();
101     }
102 }
103
104 void createButtons() {
105     createArray();
106     // draw taken/used buttons
107     String buttonTitle;
108     int day;
109     int a, b;
110     String subject;
```

```
111         String teacherName;
112
113         for (int z = 0; z < count; z++) {
114             if (LessonInfo[z][1].length() > 4) {
115                 subject = LessonInfo[z][1].substring(0, 4);
116             } else {
117                 subject = LessonInfo[z][1];
118             }
119
120             teacherName = LessonInfo[z][0].substring(0, LessonInfo[z][0].indexOf(" ") + 2) + ".";
121             buttonTitle = teacherName + "/" + subject + "/" + LessonInfo[z][4];
122
123             if (LessonInfo[z][2].equals("Monday")) {
124                 day = 0;
125             } else if (LessonInfo[z][2].equals("Tuesday")) {
126                 day = 1;
127             } else if (LessonInfo[z][2].equals("Wednesday")) {
128                 day = 2;
129             } else if (LessonInfo[z][2].equals("Thursday")) {
130                 day = 3;
131             } else {
132                 day = 4;
133             }
134             a = Integer.parseInt(LessonInfo[z][3]) - 1;
135             b = day;
136             Lessons[a][b] = addButton(buttonTitle, 160 + b * 120, 145 + a * 50, 120, 50, this);
137             check[a][b] = "ready";
138         }
139         //draw all the rest empty buttons
140         for (int i = 0; i < 9; i++) {
141             for (int j = 0; j < 5; j++) {
142                 if (check[i][j] == null) {
143                     Lessons[i][j] = addButton(lessonName, 160 + j * 120, 145 + i * 50, 120, 50, this);
144                 }
145             }
146         }
147     }
148 }
```

```
1 package ttft;
2
3 import java.awt.*;
4 import java.io.RandomAccessFile;
5 import java.io.IOException;
6
7 public class findInfo extends EasyApp {
8
9    Label Title = addLabel("", 50, 50, 290, 40, this);
10    List info = addList("", 50, 100, 290, 200, this);
11    Button Exit = addButton("Exit", 240, 310, 100, 50, this);
12
13    public findInfo() {
14       setTitle("Find information");
15       setBounds(400, 80, 380, 380);
16       Title.setFont(new Font("Arial", 0, 15));
17       Title.setForeground(Color.blue);
18
19       if (Search.index == 0) {
20          Title.setText("Teacher - " + Search.text);
21       } else if (Search.index == 1) {
22          Title.setText("Subject - " + Search.text);
23       } else if (Search.index == 2) {
24          Title.setText("Day - " + Search.text);
25       } else {
26          Title.setText("Grade - " + Search.text);
27       }
28
29       information();
30    }
31
32    public void actions(Object source, String command) {
33       if (source == Exit) {
34          System.exit(0);
35       }
36    }
37
38    void information() {
39       TimeTable.createArray();
40       info.removeAll();
41       int i = 0;
42       int index = Search.index;
43       String line;
44       while (TimeTable.LessonInfo[i][0] != null) {
45          if (TimeTable.LessonInfo[i][index].equals(Search.text)) {
46             line = TimeTable.LessonInfo[i][0] + "/" + TimeTable.LessonInfo[i][1] + "/" +
TimeTable.LessonInfo[i][2] + "/" + TimeTable.LessonInfo[i][3] + "/" + TimeTable.LessonInfo[i][4];
47             info.add(line + "\n");
48          }
49          i++;
50       }
51    }
52 }
```