

Happy dayeri xndiry

1. Main.java

```
public class Main {  
    public static void main(String[] args) {  
        new PersonsWindow();  
    }  
}
```

2. MyData.java

```
public class MyDate {  
    private int year;  
    private int month;  
    private int day;  
    public MyDate() {}  
    public MyDate(int year, int month, int day) {  
        this.year = year;  
        this.month = month;  
        this.day = day;  
    }  
    public int getYear() {  
        return year;  
    }  
    public void setYear(int year) {  
        this.year = year;  
    }  
    public int getMonth() {  
        return month;  
    }  
    public void setMonth(int month) {
```

```

this.month = month;
}
public int getDay() {
return day;
}
public void setDay(int day) {
this.day = day;
}
@Override
public String toString() {
return year +
"/" + month +
"/" + day;
}
}

```

3. Person.java

```

import java.util.ArrayList;
import java.util.Arrays;
import java.util.Date;
public class Person {
private String firstName;
private String secondName;
private int[] happyDays;
private MyDate birthday;
public Person() {}
public Person(String firstName, String secondName, int[] happyDays, MyDate

```

```
birthday) {  
    this.firstName = firstName;  
    this.secondName = secondName;  
    this.happyDays = happyDays;  
    this.birthday = birthday;  
}  
  
public String getFirstName() {  
    return firstName;  
}  
  
public void setFirstName(String firstName) {  
    this.firstName = firstName;  
}  
  
public String getSecondName() {  
    return secondName;  
}  
  
public void setSecondName(String secondName) {  
    this.secondName = secondName;  
}  
  
public int[] getHappyDays() {  
    return happyDays;  
}  
  
public void setHappyDays(int[] happyDays) {  
    this.happyDays = happyDays;  
}  
  
public MyDate getBirthday() {  
    return birthday;  
}
```

```

public void setBirthday(MyDate birthday) {
    this.birthday = birthday;
}

@Override
public String toString() {
    return firstName + " "
        + secondName +
        " " + Arrays.toString(happyDays) +
        " " + birthday + "\n";
}

public boolean happyIsEven() {
    int happySum = 0;
    for (int day : happyDays)
        happySum += day;
    if (happySum % 2 == 0)
        return true;
    return false;
    // return happySum % 2 == 0 ? true : false;
}
}

```

4. PersonDAO.java

```

public class PersonDAO {
    private Person[] persons = new Person[3];
    public PersonDAO() {
    }
}

```

```

public void addPersons() {
    Person person1 = new Person("Barry", "Smith", new int[]{5, 4, 20}, new
    MyDate(2000, 12, 12));
    Person person2 = new Person("Jack", "Johnson", new int[]{10, 20, 22}, new
    MyDate(2001, 12, 21));
    Person person3 = new Person("Aaron", "James", new int[]{25, 26, 30}, new
    MyDate(2003, 9, 9));
    persons[0] = person1;
    persons[1] = person2;
    persons[2] = person3;
}

public Person[] getPersons() {
    return persons;
}

public void sortBySecondName() {
    Person tmp = null;
    for (int i = 0; i < persons.length; i++) {
        for (int j = 0; j < persons.length - 1; j++) {
            if (persons[j].getSecondName().compareTo(persons[j +
            1].getSecondName()) > 0) {
                tmp = persons[j];
                persons[j] = persons[j + 1];
                persons[j + 1] = tmp;
            }
        }
    }
}

```

```

public Person[] evenHappyDays() {
    int happyCount = 0;
    for (Person person : persons)
        if (person.happyIsEven())
            ++happyCount;
    Person[] evenHappyPersons = new Person[happyCount];
    int index = 0;
    for (Person person : persons)
        if (person.happyIsEven())
            evenHappyPersons[index++] = person;
    return evenHappyPersons;
}
}

```

5. PersonsWindow.java

```

import javax.swing.*.*;
import java.awt.*.*;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

public class PersonsWindow extends JFrame implements ActionListener {
    private JButton show = new JButton("Show persons");
    private JButton sort = new JButton("Sort by first name");
    private JButton evens = new JButton("Show happy evens");
    private JTextArea personsInfo = new JTextArea();
    public PersonsWindow() {
        setLayout(new FlowLayout());
    }
}

```

```

setSize(500, 500);
setVisible(true);
show.setSize(100,100);
sort.setSize(100,100);
evens.setSize(100,100);
personsInfo.setPreferredSize(new Dimension(400, 400));
add(show);
add(sort);
add(evens);
add(personsInfo);
show.addActionListener(this);
sort.addActionListener(this);
evens.addActionListener(this);
}

@Override
public void actionPerformed(ActionEvent e) {
    PersonDAO personDAO = new PersonDAO();
    personDAO.addPersons();
    if (e.getSource() == show) {
        personsInfo.setText("");
        for (Person person : personDAO.getPersons()) {
            personsInfo.append(person.toString());
        }
    }
    if (e.getSource() == sort) {
        personDAO.sortBySecondName();
        personsInfo.setText("");
    }
}

```

```
for (Person person : personDAO.getPersons())
personsInfo.append(person.toString());
}
if (e.getSource() == evens) {
Person[] happyEvens = personDAO.evenHappyDays();
personsInfo.setText("");
for (Person person : happyEvens)
personsInfo.append(person.toString());
}
}
}
```