

## Tutorial 9: Java Swing

### Practice exercise 1: Painting a funny face

#### Step 1: Download a NetBeans project

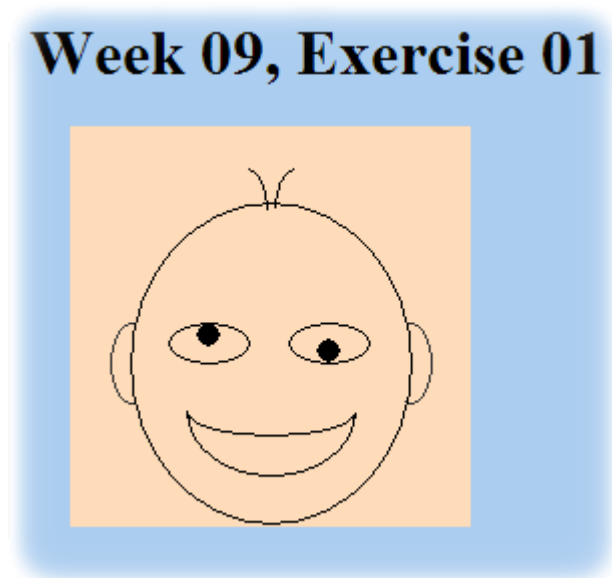
Download the NetBeans project contained in the file, `Week09_01.zip`

Unzip the file you have just downloaded.

Use NetBeans to open the project you have just unzipped.

#### Step 2: Understand the problem

The application you have just downloaded should display an applet that paints a funny face, as illustrated below.



The application you have downloaded does not paint a funny face.

#### Step 3: Paint a funny face

Study the code, and ensure you understand it. Ask for help if you need it.

Your task is to modify the file, `FunnyFace.java` so that a funny face is painted (be creative!). You should not modify any other part of the application.

#### Step 4: Test your painting

Run your Internet application. Correct any errors that you find.

### Practice exercise 2: Pass parameters to a Java applet

#### Step 1: Download a NetBeans project

Download the NetBeans project contained in the file, `Week09_02.zip`

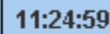
Unzip the file you have just downloaded.

Use NetBeans to open the project you have just unzipped.

### Step 2: Understand the problem

The application you have just downloaded should display `index.jsp`, which is a JavaServer Page that should contain a real-time clock in the top right-hand corner, always level with the heading.

## Week 09, Exercise 02

11:24:59

This exercise should display a real-time clock in the top-right corner of this web page, always level with the heading.

The application you have downloaded has a deficiency: it does not display the clock even though the applet, `TimerApplet`, exists.

### Step 3: Correct the application

Study the code, and ensure you understand it. Ask for help if you need it.

Your task is to do the following:

- § modify the `index.jsp` file so that the timer applet is displayed; you need a width of 60 pixels and a height of 30 pixels;
- § modify the `Week09_02.css` file so that the applet is displayed in the correct place on the web page, and with the correct border.

You should not modify any other part of the application.

### Step 4: Test your Internet application

Run your Internet application. Correct any errors that you find.

**Please note: the portfolio exercise is on the following page**

## Portfolio exercise 9: Write a Java applet

This exercise should be submitted at the milestone in week 11.

In this exercise, you will add an applet to an Internet application. The application generates some data that is to be displayed in a pie chart. The legend is displayed at the right of the pie chart if the width of the applet is greater than the height, otherwise the legend is displayed below the chart.

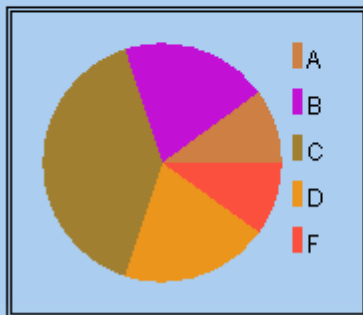
The images below illustrate the application when it is complete.

### Week 09, Portfolio Exercise

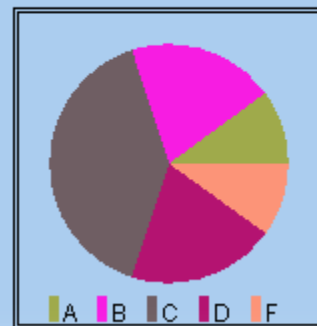
Please click the submit button to see a pie chart of results.

### Week 09, Portfolio Exercise

#### Pie Chart of Results



#### Pie Chart of Results



#### Step 1: Download a NetBeans project

Download the NetBeans project contained in the file, `Week09_Portfolio2.zip`

Unzip the file you have just downloaded.

Use NetBeans to open the project you have just unzipped.

#### Step 2: Understand the problem

Study the code, and ensure you understand it. Ask for help if you need it.

**Step 3: Enhance the applet**

At the moment, the `PieChart.java` file does not paint anything. Your task is to add code that will paint the pie chart and its legend.

You should not modify any other part of the application.

**Step 4 Test your Internet application**

Run your Internet application. Correct any errors that you find.

**Portfolio requirements:**

- § Your source code for the `PieChart.java` file in your application
- § Screenshots of your application showing all appropriate views (from step 4)