

```

/* Ethan Liao and Lorence Tsai
 * BobGame.java
 */

import java.awt.Graphics;
import java.awt.Color;
import java.awt.Font;

import java.awt.CardLayout;
import java.awt.BorderLayout;
import java.awt.FlowLayout;
import java.awt.GridLayout;

import javax.swing.JFrame;
import javax.swing.JPanel;
import javax.swing.JLabel;
import javax.swing.JButton;

class BobGame // Written by Torence Lsai
{
    public static void main(String[] bob)
    {
        BobGame bg = new BobGame();
        bg.runGame();
    }

    public void runGame()
    {
        JFrame frame = new JFrame("Bob the Frog Explores the Deep Sea of
Chinese Literacy");
        frame.setSize( 1280, 720);
        frame.setDefaultCloseOperation(frame.EXIT_ON_CLOSE);
        frame.setLocation(0,0);
        frame.setResizable(false);
        BobHolder bh = new BobHolder();
        frame.getContentPane().add(bh);
        frame.setVisible(true);
    }
}

/* Ethan Liao and Lorence Tsai
 * Written mostly by Lorence Tsai
 * BobHolder.java
 */

import java.awt.Graphics;
import java.awt.Color;
import java.awt.Font;

import java.awt.CardLayout;
import java.awt.BorderLayout;
import java.awt.FlowLayout;
import java.awt.GridLayout;

```

```

import javax.swing.JFrame;
import javax.swing.JPanel;
import javax.swing.JLabel;
import javax.swing.JButton;

class BobHolder extends JPanel
{
    CardLayout cards;
    private boolean isStrokes;
    public BobHolder()
    {
        isStrokes = false;
        cards = new CardLayout();
        setLayout(cards);
        Instructions instructions = new Instructions(this);

        Cover cover = new Cover(this);
        Home home = new Home(this);
        GamePanel game = new GamePanel(this);
        Flashcards fcards = new Flashcards(this);
        add(cover, "cover");
        add(home, "home");
        add(instructions, "instructions");
        add(game, "game");
        add(fcards, "cards");
    }

    public CardLayout getCards()
    {
        return cards;
    }

    public void setStroke(boolean isStrokeIn)
    {
        isStrokes = isStrokeIn;
    }
}

/* Ethan Liao and Lorence Tsai
 * BasePanel.java
 */

import java.awt.Graphics;
import java.awt.Color;
import java.awt.Font;
import java.awt.Dimension;

import java.awt.CardLayout;
import java.awt.BorderLayout;
import java.awt.FlowLayout;
import java.awt.GridLayout;

import javax.swing.JFrame;

```

```

import javax.swing.JPanel;
import javax.swing.JLabel;
import javax.swing.JButton;

class BasePanel extends JPanel
{
    BobHolder bh3;
    private JPanel empty1 = new JPanel();
    private JPanel empty2 = new JPanel();
    private JPanel centerPanel = new JPanel();
    public BasePanel(BobHolder bhIn2, String titleIn)
    {
        bh3 = bhIn2;

        setLayout(new BorderLayout(10, 10));

        JLabel title = new JLabel(titleIn, JLabel.CENTER);
        title.setFont(new Font("serif", Font.BOLD, 36));
        add(title, BorderLayout.NORTH);

        empty1.setPreferredSize(new Dimension(250, 100));
        empty1.setBackground(Color.BLUE);
        empty1.setLayout(new FlowLayout(FlowLayout.CENTER, 10, 10));
        add(empty1, BorderLayout.WEST);

        empty2.setPreferredSize(new Dimension(250, 100));
        empty2.setBackground(Color.BLUE);
        empty2.setLayout(new FlowLayout(FlowLayout.CENTER, 10, 10));
        add(empty2, BorderLayout.EAST);

        add(centerPanel, BorderLayout.CENTER);
    }

    public JPanel getPanel(String panelName)
    {
        if (panelName.equals("left"))
        {
            return empty1;
        }
        else if (panelName.equals("right"))
        {
            return empty2;
        }

        return centerPanel;
    }
}

/* Ethan Liao and Lorence Tsai
 * Cover.java
 * Done by Ethan Liao
 */
import java.awt.Graphics;
import java.awt.Color;

```

```

import java.awt.Font;

import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

import java.awt.CardLayout;
import java.awt.BorderLayout;
import java.awt.FlowLayout;
import java.awt.GridLayout;

import javax.swing.JFrame;
import javax.swing.JPanel;
import javax.swing.JLabel;
import javax.swing.JButton;

class Cover extends JPanel
{
    BobHolder bh2;
    public Cover(BobHolder bhIn)
    {
        bh2 = bhIn;
        setBackground(Color.BLUE);
        setLayout(null);

        JLabel titleLabel = new JLabel("<html><center>Bob the Frog  
Explores the Deep Sea of Chinese Literacy</center></html>");
        titleLabel.setFont(new Font("serif", Font.BOLD, 36));
        add(titleLabel);
        titleLabel.setBounds(350, 0, 580, 150);

        CoverButtonHandler cbh = new CoverButtonHandler();

        JButton next = new JButton("Play");
        next.setFont(new Font("serif", Font.BOLD, 24));
        next.setBounds(568, 200, 144, 40);
        next.addActionListener(cbh);
        add(next);

        JButton quit = new JButton("Quit");
        quit.setFont(new Font("serif", Font.BOLD, 24));
        quit.setBounds(568, 275, 144, 40);
        quit.addActionListener(cbh);
        add(quit);
    }

    class CoverButtonHandler implements ActionListener
    {
        public void actionPerformed(ActionEvent evt)
        {
            String command = evt.getActionCommand();
            if (command.equals("Play"))
            {
                bh2.getCards().show(bh2, "home");
            }
        }
    }
}

```

```

        else if (command.equals("Quit"))
        {
            System.exit(0);
        }
    }
}

/* Ethan Liao and Lorence Tsai
 * Home.java
 * Done by Ethan Liao
 */
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

import java.awt.GridLayout;

import javax.swing.JButton;

class Home extends BasePanel
{
    public Home(BobHolder bhIn3)
    {
        super(bhIn3, "Select Game Mode");

        JButton instructButton = new JButton("How to Play");
        add(instructButton);
        ButtonHandler bHandler = new ButtonHandler();
        instructButton.addActionListener(bHandler);
        getPanel("right").add(instructButton);

        getPanel("center").setLayout(new GridLayout(1, 3));

        JButton[] menuButtons = new JButton[3];
        String[] buttonNames = {"Flashcards", "Word Identification",
"Stroke Order"};
        for (int i=0; i<3; i++) {
            menuButtons[i] = new JButton(buttonNames[i]);
            menuButtons[i].addActionListener(bHandler);
            getPanel("center").add(menuButtons[i]);
        }
        add(getPanel("center"));
    }

    class ButtonHandler implements ActionListener
    {
        public void actionPerformed(ActionEvent evt)
        {
            String command = evt.getActionCommand();
            if (command.equals("How to Play"))
            {
                bh3.getCards().show(bh3, "instructions");
            }
            else if (command.equals("Flashcards"))

```

```

        {
            bh3.getCards().show(bh3, "cards");
        }
        else if (command.equals("Word Identification"))
        {
            bh3.getCards().show(bh3, "game");
            bh3.setStroke(false);
        }
        else if (command.equals("Stroke Order"))
        {
            bh3.getCards().show(bh3, "game");
            bh3.setStroke(true);
        }
    }
}

/*Ethan Liao and Lorence Tsai
 * GamePanel.java
 * Done by Lorence Tsai
 */
import java.awt.Color;
import java.awt.Graphics;

import javax.swing.JPanel;
import java.awt.BorderLayout;
import javax.swing.JButton;

import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

class GamePanel extends BasePanel
{
    BobHolder bh5;
    public GamePanel(BobHolder bh5In)
    {
        super(bh5In, "game");
        bh5 = bh5In;
        Paint paint = new Paint();
        add(paint, BorderLayout.CENTER);

        JButton home = new JButton("home");
        HomeButtonListener hbl = new HomeButtonListener();

        home.addActionListener(hbl);
        getPanel("right").add(home);
    }

    class HomeButtonListener implements ActionListener
    {
        public void actionPerformed(ActionEvent evt)
        {
            String command = evt.getActionCommand();

```

```

        if (command.equals("home"))
        {
            bh5.getCards().show(bh5, "home");
        }
    }
}

class Paint extends JPanel
{
    public void paintComponent(Graphics g)
    {
        super.paintComponent(g);
        drawRects(g);
    }

    public void drawRects(Graphics g)
    {
        g.setColor(Color.PINK);
        g.fillRect(0, 140, 380, 240);
        g.fillRect(380, 140, 380, 240);
        g.fillRect(0, 390, 380, 240);
        g.fillRect(380, 390, 380, 240);

        g.setColor(Color.BLACK);
        g.drawRect(0, 140, 380, 240);
        g.drawRect(380, 140, 380, 240);
        g.drawRect(0, 390, 380, 240);
        g.drawRect(380, 390, 380, 240);
    }
}

/*Ethan Liao and Lorence Tsai
* Flashcards.java
* Done by Ethan Liao
*/

import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

import javax.swing.JButton;

public class Flashcards extends BasePanel
{
    BobHolder bh7;
    public Flashcards(BobHolder bhIn6)
    {
        super(bhIn6, "Review Your Vocab");
        bh7 = bhIn6;
        JButton home2 = new JButton("home");
        HomeButtonListener2 hbl2 = new HomeButtonListener2();

        home2.addActionListener(hbl2);
        getPanel("right").add(home2);
    }
}

```

```

    }

    class HomeButtonListener2 implements ActionListener
    {
        public void actionPerformed(ActionEvent evt)
        {
            String command = evt.getActionCommand();
            if (command.equals("home"))
            {
                bh7.getCards().show(bh7, "home");
            }
        }
    }
}

/* Ethan Liao and Lorence Tsai
* Instructions.java
* Done by Lorence Tsai
*/

import java.awt.Font;

import java.awt.BorderLayout;
import java.awt.Dimension;
import java.awt.FlowLayout;

import java.awt.event.ActionListener;
import java.awt.event.ActionEvent;

import javax.swing.JPanel;
import javax.swing.JTextArea;
import javax.swing.JButton;
import javax.swing.JScrollPane;

class Instructions extends BasePanel
{
    BobHolder bh4;
    public Instructions(BobHolder bhIn4)
    {
        super(bhIn4, "How to Play");
        bh4 = bhIn4;

        getPanel("center").setLayout(new FlowLayout(FlowLayout.CENTER,
1280, 10));
        String instructions = "In the game panel, you have a frog, which
is what you are " +
            "controlling. You move the frog either by dragging it or
using the arrow keys" +
            " to the square with the right answer to the question. There
will be 4 answer" +
            " choices. After you moved the frog to the desired position,
you press submit" +
            " and the computer will grade your answer.";
        JTextArea instructionsText = new JTextArea(instructions);
    }
}

```

```

        JButton homeButton = new JButton("Home");
        instructionsText.setFont(new Font("dialog", Font.PLAIN, 24));

        instructionsText.setEditable(false);
        instructionsText.setLineWrap(true);
        instructionsText.setWrapStyleWord(true);

        HomeListener hl = new HomeListener();

        homeButton.addActionListener(hl);

        JScrollPane scroller = new JScrollPane(instructionsText);
        scroller.setPreferredSize(new Dimension(480, 200));
        getPanel("center").add(scroller);
        getPanel("center").add(homeButton);
    }

    class HomeListener implements ActionListener
    {
        public void actionPerformed(ActionEvent evt)
        {
            String command = evt.getActionCommand();
            if (command.equals("Home"))
            {
                bh4.getCards().show(bh4, "home");
            }
        }
    }
}

```