UJIAN AKHIR SEMESTER

PRAKTIKUM PEMROGAMAN BERORIENTASI OBJEK

Disusun oleh:

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PROGRAM STUDI TEKNIK INFORMATIKA

FAKULTAS KOMUNIKASI DAN INFORMATIKA

UNIVERSITAS MUHAMMADIYAH SURAKARTA

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Soal Tipe A.

1. a.) Buatlah class

```
package num1;

public abstract class Pegawai {
        private String namaPeg;

        public Pegawai(String nama) {
                namaPeg = nama;
        }
        public String namaPegawai() {
                return namaPeg;
        }
        public abstract double gaji();
}
```

b.) Atribut nama dan metode gaji() harus berdasarkan class abstract di atas!

c.) Tambahkan class java.text.DecimalFormat agar masukan ‘gaji’ mudah dibaca sesuai mata uang rupiah.

```
package num1;
import java.text.DecimalFormat;

public class DataPeg extends Pegawai{
        String jabatan;
        double dividen;

        public DataPeg(String nama) {
                super(nama);
        }
        public String getname() {
                return namaPegawai();
        }
        public double gaji() {
                return 12000000;
        }
        public double getGaji() {
                return gaji();
        }
        public String jabatan() {
                return "Direktur";
        }
        public double dividen() {
                return gaji() * (62.5 / 100);
        }
```

```
    public static void main (String[] args) {
            DataPeg data = new DataPeg("Doni");
            DecimalFormat df = new DecimalFormat ("#,###,##0.-");

            System.out.println ("====================\n"+
                                "Nama    : "+ data.getname()+"\n"+
                                "Jabatan : "+ data.jabatan()+"\n"+
                                "Gaji    : Rp. "+ df.format(data.getGaji())+"\n"+
                                "Dividen : Rp. "+ df.format(data.dividen())+"\n"+
                                "Total   : Rp. "+ df.format(data.getGaji()+data.dividen()));

    }
}
```

Output

```
Output - UAS_PRAK (run)
run:
====================
Nama    : Doni
Jabatan : Direktur
Gaji    : Rp. 12.000.000,-
Dividen : Rp. 7.500.000,-
Total   : Rp. 19.500.000,-
BUILD SUCCESSFUL (total time: 1 second)
```

2. Interface Write Interface.

```
package num2;

public interface Write {
        public void Writing();

}
```

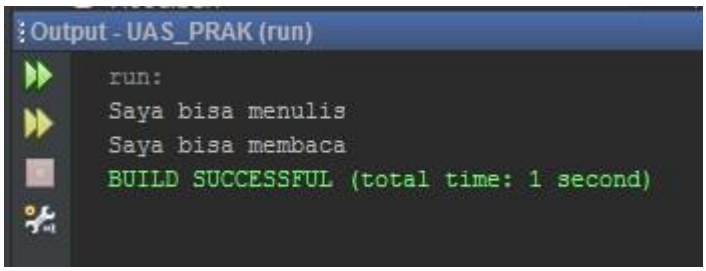
Interface Read merupakan turunan dari interface Write

```
package num2;

public interface Read extends Write{
        public void Reading();

}
```

InterfaceDemo mengimplementasikan interface Read dan menggunakan metode Writing() dan Reading().

```
package num2;

public class InterfaceDemo implements Read{

        public void Writing() {
                System.out.println("Saya bisa menulis");
        }

        public void Reading() {
                System.out.println("Saya bisa membaca");
        }

public static void main(String[] args) {
        InterfaceDemo demo = new InterfaceDemo();

        demo.Writing();
        demo.Reading();
}
}
```

Output



3. Buatlah program GUI menggunakan JRadioButton! Program melihat tipe kepribadian seseorang berdasarkan warna kesukaannya. Terdapat enam jRadioButton, yaitu merah, kuning, hijau, biru, hitam, dan putih. Apabila salah satu jRadioButton tersebut dipilih, maka terdapat JLabel menjelaskan kepribadian seseorang.

```java
package num3;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import javax.swing.*;

public class ProgramKepribadian {
    private JRadioButton merah, kuning, hijau, biru, hitam, putih;
    private JLabel kepribadian;

    void Program(){
        JFrame frame = new JFrame("Program Melihat Tipe Kepribadian");
        frame.setSize(750, 300);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.setVisible(true);

        JPanel panel = new JPanel();
        panel.setLayout(null);
        frame.add(panel);

        JLabel label1 = new JLabel("Silahkan Pilih Warna Kesukaan Anda.");
        label1.setBounds(280, 50, 600, 25);
        panel.add(label1);

        kepribadian = new JLabel("");
        kepribadian.setBounds(100, 170, 600, 25);
        panel.add(kepribadian);

        merah = new JRadioButton ("Merah");
        kuning = new JRadioButton("Kuning");
        hijau = new JRadioButton("Hijau");
        biru = new JRadioButton("Biru");
        hitam = new JRadioButton("Hitam");
        putih = new JRadioButton("Putih");
```

```
        merah.setBounds(100, 100, 100, 30);
        kuning.setBounds(200, 100, 100, 30);
        hijau.setBounds(300, 100, 100, 30);
        biru.setBounds(400, 100, 100, 30);
        hitam.setBounds(500, 100, 100, 30);
        putih.setBounds(600, 100, 100, 30);

        panel.add(merah);
        panel.add(kuning);
        panel.add(hijau);
        panel.add(biru);
        panel.add(hitam);
        panel.add(putih);

        merah.addActionListener(tipe);
        kuning.addActionListener(tipe);
        hijau.addActionListener(tipe);
        hitam.addActionListener(tipe);
        putih.addActionListener(tipe);

        ButtonGroup bg = new ButtonGroup();
        bg.add(merah);
        bg.add(kuning);
        bg.add(hijau);
        bg.add(biru);
        bg.add(hitam);
        bg.add(putih);
    }
```

```
ActionListener tipe = new ActionListener(){
    public void actionPerformed(ActionEvent action) {
        String makna;
        if (action.getSource() == merah) {
            makna = "Tipe Kepribadian : Kepribadian terbuka, optimis, disiplin tinggi, ambisius, subjektif.";
                    kepribadian.setText(makna);
        }else if (action.getSource() == kuning) {
            makna = "Tipe Kepribadian : Cerdik, berbakat dalam bisnis, mempunyai selera humor yang baik.";
                    kepribadian.setText(makna);
        }else if (action.getSource() == hijau) {
            makna = "Tipe Kepribadian : Mudah terus terang dalam berkata, mampu bersosialisasi dengan baik.";
                    kepribadian.setText(makna);
        }else if (action.getSource() == biru) {
            makna = "Tipe Kepribadian : Sabar, sensitif, dan mudah menyadari kesalahan.";
                    kepribadian.setText(makna);
        }else if (action.getSource() == hitam) {
            makna = "Tipe Kepribadian : Pribadi yang bermartabat, dihargai orang lain tetapi tidak pula menonjolkan diri.";
                    kepribadian.setText(makna);
        }else if (action.getSource() == putih) {
            makna = "Tipe Kepribadian : Perfeksionis, standar tinggi, namun gaya hidup cenderung sederhana.";
                    kepribadian.setText(makna);
        }
    }
};

public static void main(String[] args) {
    ProgramKepribadian demo = new ProgramKepribadian();
    demo.Program();
}}
```

Output

4. Buatlah program splash screen, yakni tampilan gambar yang akan muncul beberapa detik sebelum tampilan frame utama.

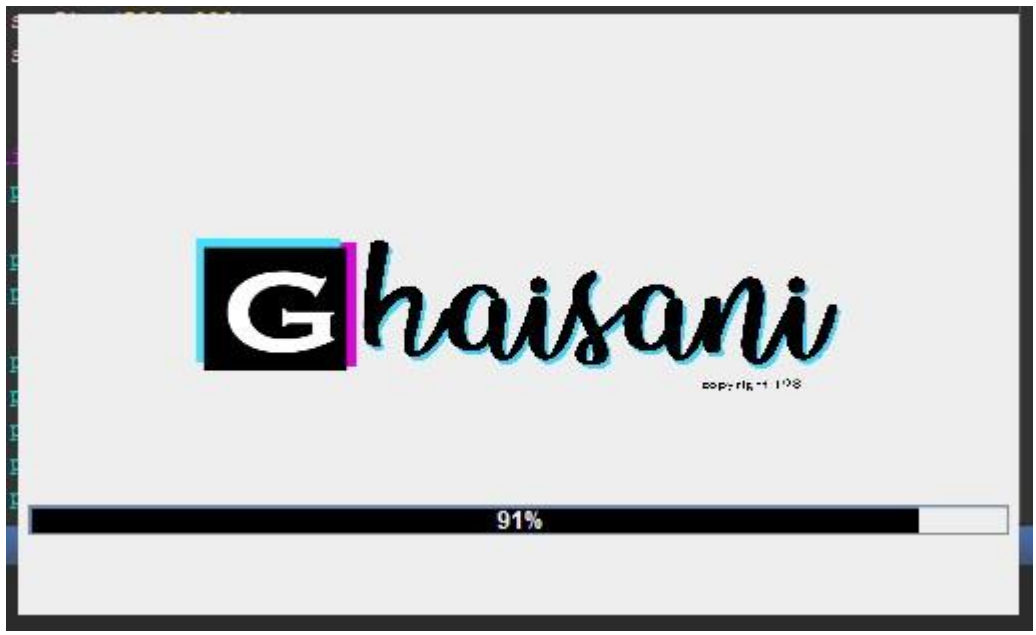
```
package number4;

import java.awt.BorderLayout;
import java.awt.Graphics;
import java.awt.Graphics2D;
import java.awt.Image;
import javax.swing.ImageIcon;
import javax.swing.JPanel;

/**
 *
 * @author ghaisani
 */
public class SplashScreen extends JPanel{
    private Image image;

    public SplashScreen() {
        image = new ImageIcon(getClass().getResource("logokuh.png")).getImage();
        this.setLayout(new BorderLayout());
    }

    @Override
    protected void paintComponent(Graphics g){
        super.paintComponent(g);
        Graphics2D gd=(Graphics2D)g.create();
        gd.drawImage(image,0,0,getWidth(),getHeight(),null);
        gd.dispose();
    }
}
```

```java
package number4;

import java.awt.Color;
import java.awt.Dimension;
import java.awt.FlowLayout;
import javax.swing.*;

/**
 *
 * @author ghaisani
 */
public class Number4 extends JWindow{
    private int duration;
    private JProgressBar progress;
    private SplashScreen panel, panel2;
    private JPanel p_bar;

    public Number4(int d){
        duration = d;
        setSize(500, 300);
        setLocationRelativeTo(null);
    }

    public void showSplash(){
        panel = new SplashScreen();

        p_bar = new JPanel(new FlowLayout(FlowLayout.CENTER, 10,40));
        p_bar.setOpaque(false);

        progress = new JProgressBar(0, 100);
        progress.setStringPainted(true);
        progress.setPreferredSize(new Dimension(getWidth() - 10, 15));
        progress.setForeground(Color.black);
        progress.setVisible(true);
```

```
        p_bar.add(progress);

        panel.add(p_bar, "South");
        getContentPane().add(panel, "Center");

        setVisible(true);

        for (int i = 0; i < 100; i++) {
            try {
                progress.setValue(i);
                Thread.sleep(duration);
            } catch (Exception e) {
                e.printStackTrace();
            }
        }
        setVisible(false);
    }

    public void showSplashAndExit(){
        showSplash();
        dispose();
    }

    public static void main(String []args){
        Number4 obj = new Number4(100);
        obj.showSplashAndExit();

        MainFrame mf = new MainFrame();
        mf.setSize(600, 150);

        JComboBox pilihan = new JComboBox();
        pilihan.setBounds(150, 50, 150, 25);
        pilihan.setModel(new javax.swing.DefaultComboBoxModel(new String[] {
```

```
        "Strongly Agree", "Agree", "Neither Agree or Disagree", "Disagree", "Strongly Disagree"
        }));

        JPanel panel = new JPanel();
        JLabel Confess = new JLabel("The Object Oriented Programming practicum handbook is clear anda easy to understand.");
        Confess.setBounds(25, 25, 400, 25);

        panel.add(Confess);
        panel.add(pilihan);

        mf.add(panel);
        mf.setVisible(true);
    }

}
```

Output Splash Screen



Main Frame