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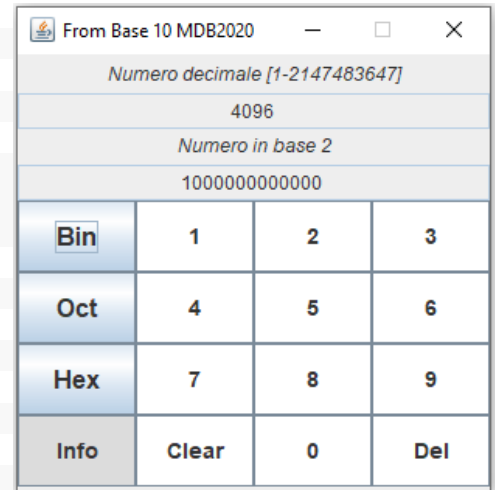
import java.awt.*;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import javax.swing.*;

public class ConvertitoreDec extends JFrame implements ActionListener{

    JButton b0,b1,b2,b3,b4,b5,b6,b7,b8,b9;
    JButton bBase2,bBase8,bBase16,bBacks,bClear,bInfo;
    JLabel lNumeroDecimale,lNumeroInBase;
    JTextField tNumeroDecimale,tNumeroInBase;
    int max = Integer.MAX_VALUE;
    //max è il massimo valore intero che si può convertire
    //(pari in binario a 2^31-1)
    String s="";
    JFrame frameInfo;

    public ConvertitoreDec(){
        frameInfo=new JFrame();
        Container c=this.getContentPane();
        c.setLayout(new GridLayout(6,1));
        Font fs=new Font("Arial",Font.BOLD,14);
        Font fs2=new Font("Arial",Font.BOLD,16);
        Font fs3=new Font("Arial",Font.ITALIC,12);
        b0 =new JButton("0");b0.setBackground(Color.WHITE);b0.setFont(fs);
        b1 =new JButton("1");b1.setBackground(Color.WHITE);b1.setFont(fs);
        b2 =new JButton("2");b2.setBackground(Color.WHITE);b2.setFont(fs);
        b3 =new JButton("3");b3.setBackground(Color.WHITE);b3.setFont(fs);
        b4 =new JButton("4");b4.setBackground(Color.WHITE);b4.setFont(fs);
        b5 =new JButton("5");b5.setBackground(Color.WHITE);b5.setFont(fs);
        b6 =new JButton("6");b6.setBackground(Color.WHITE);b6.setFont(fs);
        b7 =new JButton("7");b7.setBackground(Color.WHITE);b7.setFont(fs);
        b8 =new JButton("8");b8.setBackground(Color.WHITE);b8.setFont(fs);
        b9 =new JButton("9");b9.setBackground(Color.WHITE);b9.setFont(fs);
        bBase2 = new JButton("Bin");bBase2.setFont(fs2);
        bBase8 = new JButton("Oct");bBase8.setFont(fs2);
        bBase16 = new JButton("Hex");bBase16.setFont(fs2);
        bBacks = new JButton("Del");
        bBacks.setBackground(Color.WHITE);bBacks.setFont(fs);
        bClear= new JButton("Clear");
        bClear.setBackground(Color.WHITE);bClear.setFont(fs);
        bInfo = new JButton("Info");bInfo.setFont(fs);
        bInfo.setBackground(new Color(220,220,220));
        //
        lNumeroDecimale=new JLabel("Numero decimale [1-"+max+"]");
        lNumeroDecimale.setFont(fs3);
        lNumeroDecimale.setHorizontalAlignment(SwingConstants.CENTER);
        tNumeroDecimale= new JTextField();
        tNumeroDecimale.setEditable(false);
        tNumeroDecimale.setPreferredSize(new Dimension(290, 45));
        tNumeroDecimale.setHorizontalAlignment(SwingConstants.CENTER);
        //
        lNumeroInBase=new JLabel("");
        lNumeroInBase.setFont(fs3);
        lNumeroInBase.setHorizontalAlignment(SwingConstants.CENTER);
        tNumeroInBase= new JTextField();
        tNumeroInBase.setEditable(false);
        tNumeroInBase.setPreferredSize(new Dimension(290, 45));
        tNumeroInBase.setHorizontalAlignment(SwingConstants.CENTER);
        //
    }
}

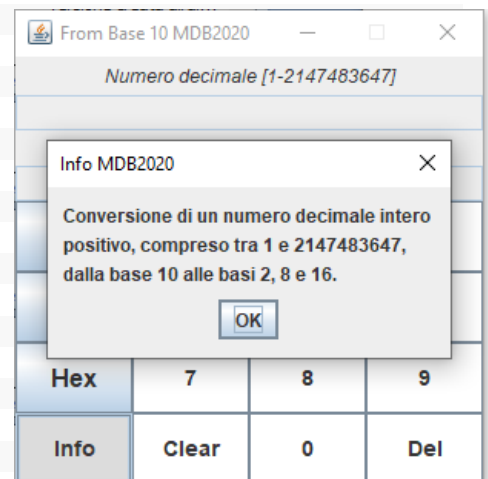
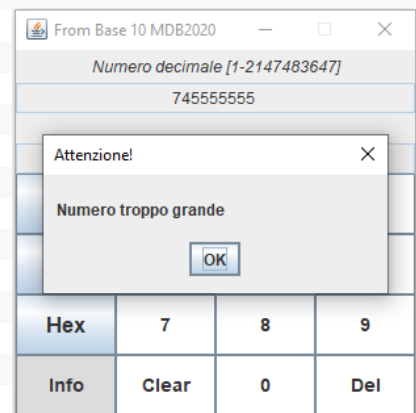
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    JPanel p0=new JPanel();
    JPanel p1=new JPanel();
    JPanel p2=new JPanel();
    JPanel p3=new JPanel();
    JPanel p4=new JPanel();
    JPanel p5=new JPanel();
    //
    p0.setLayout(new GridLayout(2,1));
    //riga 0 con Label e TextField del numero decimale intero da convertire
    p0.add(lNumeroDecimale);
    p0.add(tNumeroDecimale);
    //
    p1.setLayout(new GridLayout(2,1));
    //riga 1 con Label e TextField del numero convertito in base 2 (o 8 o 16)
    p1.add(lNumeroInBase);
    p1.add(tNumeroInBase);
    //
    p2.setLayout(new GridLayout(1,4));
    p2.add(bBase2);
    p2.add(b1);p2.add(b2);p2.add(b3);
    //
    p3.setLayout(new GridLayout(1,4));
    p3.add(bBase8);
    p3.add(b4);p3.add(b5);p3.add(b6);
    //
    p4.setLayout(new GridLayout(1,4));
    p4.add(bBase16);
    p4.add(b7);p4.add(b8);p4.add(b9);
    //
    p5.setLayout(new GridLayout(1,4));
    p5.add(bInfo);
    p5.add(bClear);
    p5.add(b0);
    p5.add(bBacks);
    //
    c.add(p0); c.add(p1); c.add(p2); c.add(p3); c.add(p4); c.add(p5);
    b0.addActionListener(this);
    b1.addActionListener(this);
    b2.addActionListener(this);
    b3.addActionListener(this);
    b4.addActionListener(this);
    b5.addActionListener(this);
    b6.addActionListener(this);
    b7.addActionListener(this);
    b8.addActionListener(this);
    b9.addActionListener(this);
    bBase2.addActionListener(this);
    bBase8.addActionListener(this);
    bBase16.addActionListener(this);
    bBacks.addActionListener(this);
    bClear.addActionListener(this);
    bInfo.addActionListener(this);
    //
    this.setTitle("From Base 10 MDB2020");
    this.setResizable(false);
    this.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    this.pack();//
    this.setSize(320, 320);
    this.setVisible(true);
}

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```

public static void main(String[] args) {
    new ConvertitoreDec();
}
@Override
public void actionPerformed(ActionEvent e) {
    String action=e.getActionCommand();
    char c0 = action.charAt(0);
    switch(c0) {
        case '0':
            if (!s.equals("")) s+="0";
            break;
        case '1':
            s+="1";break;
        case '2':
            s+="2";break;
        case '3':
            s+="3";break;
        case '4':
            s+="4";break;
        case '5':
            s+="5";break;
        case '6':
            s+="6";break;
        case '7':
            s+="7";break;
        case '8':
            s+="8";break;
        case '9':
            s+="9";break;
        case 'C':
            if(!s.equals("")) {
                s="";
                tNumeroDecimale.setText(""); lNumeroInBase.setText("");
                tNumeroInBase.setText("");}
            break;
        case 'D':
            if(!tNumeroInBase.getText().contentEquals(""))return;
            // se vi è stata una conversione il tasto BackSpace non funziona
            if(!s.contentEquals(""))s=s.substring(0,s.length()-1);
            break;
        case 'I':
            String testo="Conversione di un numero decimale intero\npositivo, ";
            testo+=" compreso tra 1 e 2147483647,\ndalla base 10 ";
            testo+="alle basi 2, 8 e 16.";
            JOptionPane.showMessageDialog(this, testo, "Info MDB2020", JOptionPane.PLAIN_MESSAGE);
            break;
        case 'B':
            converti(2);break;
        case 'O':
            converti(8);break;
        case 'H':
            converti(16);break;
    }
    if(!s.equals("") && Double.valueOf(s)>max) {
        s=s.substring(0,s.length()-1);
        JOptionPane.showMessageDialog(this, "Numero troppo grande", "Attenzione!", JOptionPane.PLAIN_MESSAGE);
    }
    tNumeroDecimale.setText(s);
}
}

```

```

void converti(int bc) {
    String snumero=tNumeroDecimale.getText();
    if(snumero.equals(""))return;
    int numero=Integer.parseInt(snumero);
    String risultato = "";
    int resto;
    while (numero > 0) {
        resto = numero % bc;
        if (bc == 16) {
            if (resto == 10)
                risultato = "A"+risultato;
            else if (resto == 11)
                risultato = "B"+risultato;
            else if (resto == 12)
                risultato = "C"+risultato;
            else if (resto == 13)
                risultato = "D"+risultato;
            else if (resto == 14)
                risultato = "E"+risultato;
            else if (resto == 15)
                risultato = "F"+risultato;
            else
                risultato = resto+risultato;
        } else
            risultato= resto+risultato;
        numero /= bc;
    }
    lNumeroInBase.setText("Numero in base "+bc);
    tNumeroInBase.setText(risultato);
}
}

```