PROGRAM

import javax . swing .\*;

import java . awt .\*;

import java . awt . event .\*;

public class calculator {

calculator () {

JFrame jrm = new JFrame ();

jrm . setSize ( 500 , 500 );

JLabel jbl = new JLabel ( "Calculator" );

jbl . setBounds ( 227 , 10 , 400 , 30 );

jrm . add ( jbl );

final JTextField jtf = new JTextField ();

jtf . setEditable ( false );

jtf . setBounds ( 50 , 50 , 400 , 30 );

jrm . add ( jtf );

JButton b1 , b2 , b3 , b4 , b5 , b6 , b7 , b8 , b9 , b0 , bdiv , bmul , bsub ,

badd , bdec , beq , bdel , bclr , clear , dot ;

b1 = new JButton ( "1" );

b2 = new JButton ( "2" );

b3 = new JButton ( "3" );

b4 = new JButton ( "4" );

b5 = new JButton ( "5" );

b6 = new JButton ( "6" );

b7 = new JButton ( "7" );

b8 = new JButton ( "8" );

b9 = new JButton ( "9" );

b0 = new JButton ( "0" );

bdiv = new JButton ( "/" );

bmul = new JButton ( "Ã—" );

bsub = new JButton ( "-" );

badd = new JButton ( "+" );

beq = new JButton ( "=" );

clear = new JButton ( "Clear" );

dot = new JButton ( "." );

b7 . setBounds ( 90 , 100 , 50 , 40 );

b8 . setBounds ( 180 , 100 , 50 , 40 );

b9 . setBounds ( 270 , 100 , 50 , 40 );

bdiv . setBounds ( 360 , 100 , 50 , 40 );

b4 . setBounds ( 90 , 170 , 50 , 40 );

b5 . setBounds ( 180 , 170 , 50 , 40 );

b6 . setBounds ( 270 , 170 , 50 , 40 );

bmul . setBounds ( 360 , 170 , 50 , 40 );

b1 . setBounds ( 90 , 240 , 50 , 40 );

b2 . setBounds ( 180 , 240 , 50 , 40 );

b3 . setBounds ( 270 , 240 , 50 , 40 );

bsub . setBounds ( 360 , 240 , 50 , 40 );

b0 . setBounds ( 180 , 310 , 50 , 40 );

beq . setBounds ( 270 , 310 , 50 , 40 );

badd . setBounds ( 360 , 310 , 50 , 40 );

clear . setBounds ( 200 , 400 , 90 , 40 );

dot . setBounds ( 90 , 310, 50 , 40 );

jrm . add ( b7 );

jrm . add ( b8 );

jrm . add ( b9 );

jrm . add ( bdiv );

jrm . add ( b4 );

jrm . add ( b5 );

jrm . add ( b6 );

jrm . add ( bmul );

jrm . add ( b1 );

jrm . add ( b2 );

jrm . add ( b3 );

jrm . add ( bsub );

jrm . add ( b0 );

jrm . add ( beq );

jrm . add ( badd );

jrm . add ( clear );

jrm . add ( dot );

jrm . setLayout ( null );

jrm . setResizable ( false );

jrm . setDefaultCloseOperation ( JFrame . EXIT\_ON\_CLOSE );

jrm . setVisible ( true );

b1 . addActionListener ( new ActionListener () {

public void actionPerformed ( ActionEvent e ) {

if ( jtf . getText (). equals ( "Enter two operands!" ) ||

jtf . getText (). equals ( "Not defined!" ))

jtf . setText ( "" );

jtf . setText ( jtf . getText () + "1" );

}

});

b2 . addActionListener ( new ActionListener () {

public void actionPerformed ( ActionEvent e ) {

if ( jtf . getText (). equals ( "Enter two operands!" ) ||

jtf . getText (). equals ( "Not defined!" ))

jtf . setText ( "" );

jtf . setText ( jtf . getText () + "2" );

}

});

b3 . addActionListener ( new ActionListener () {

public void actionPerformed ( ActionEvent e ) {

if ( jtf . getText (). equals ( "Enter two operands!" ) ||

jtf . getText (). equals ( "Not defined!" ))

jtf . setText ( "" );

jtf . setText ( jtf . getText () + "3" );

}

});

b4 . addActionListener ( new ActionListener () {

public void actionPerformed ( ActionEvent e ) {

if ( jtf . getText (). equals ( "Enter two operands!" ) ||

jtf . getText (). equals ( "Not defined!" ))

jtf . setText ( "" );

jtf . setText ( jtf . getText () + "4" );

}

});

b5 . addActionListener ( new ActionListener () {

public void actionPerformed ( ActionEvent e ) {

if ( jtf . getText (). equals ( "Enter two operands!" ) ||

jtf . getText (). equals ( "Not defined!" ))

jtf . setText ( "" );

jtf . setText ( jtf . getText () + "5" );

}

});

b6 . addActionListener ( new ActionListener () {

public void actionPerformed ( ActionEvent e ) {

if ( jtf . getText (). equals ( "Enter two operands!" ) ||

jtf . getText (). equals ( "Not defined!" ))

jtf . setText ( "" );

jtf . setText ( jtf . getText () + "6" );

}

});

b7 . addActionListener ( new ActionListener () {

public void actionPerformed ( ActionEvent e ) {

if ( jtf . getText (). equals ( "Enter two operands!" ) ||

jtf . getText (). equals ( "Not defined!" ))

jtf . setText ( "" );

jtf . setText ( jtf . getText () + "7" );

}

});

b8 . addActionListener ( new ActionListener () {

public void actionPerformed ( ActionEvent e ) {

if ( jtf . getText (). equals ( "Enter two operands!" ) ||

jtf . getText (). equals ( "Not defined!" ))

jtf . setText ( "" );

jtf . setText ( jtf . getText () + "8" );

}

});

b9 . addActionListener ( new ActionListener () {

public void actionPerformed ( ActionEvent e ) {

if ( jtf . getText (). equals ( "Enter two operands!" ) ||

jtf . getText (). equals ( "Not defined!" ))

jtf . setText ( "" );

jtf . setText ( jtf . getText () + "9" );

}

});

b0 . addActionListener ( new ActionListener () {

public void actionPerformed ( ActionEvent e ) {

if ( jtf . getText (). equals ( "Enter two operands!" ) ||

jtf . getText (). equals ( "Not defined!" ))

jtf . setText ( "" );

jtf . setText ( jtf . getText () + "0" );

}

});

clear . addActionListener ( new ActionListener () {

public void actionPerformed ( ActionEvent e ) {

if ( jtf . getText (). equals ( "Enter two operands!" ) ||

jtf . getText (). equals ( "Not defined!" ))

jtf . setText ( "" );

jtf . setText ( "" );

}

});

dot . addActionListener ( new ActionListener () {

public void actionPerformed ( ActionEvent e ) {

if ( jtf . getText (). equals ( "Enter two operands!" ) ||

jtf . getText (). equals ( "Not defined!" ))

jtf . setText ( "" );

jtf . setText ( jtf . getText () + "." );

}

});

badd . addActionListener ( new ActionListener () {

public void actionPerformed ( ActionEvent e ) {

if ( jtf . getText (). equals ( "Enter two operands!" ) ||

jtf . getText (). equals ( "Not defined!" ))

jtf . setText ( "" );

jtf . setText ( jtf . getText () + "+" );

}

});

bsub . addActionListener ( new ActionListener () {

public void actionPerformed ( ActionEvent e ) {

if ( jtf . getText (). equals ( "Enter two operands!" ) ||

jtf . getText (). equals ( "Not defined!" ))

jtf . setText ( "" );

jtf . setText ( jtf . getText () + "-" );

}

});

bmul . addActionListener ( new ActionListener () {

public void actionPerformed ( ActionEvent e ) {

if ( jtf . getText (). equals ( "Enter two operands!" ) ||

jtf . getText (). equals ( "Not defined!" ))

jtf . setText ( "" );

jtf . setText ( jtf . getText () + "X" );

}

});

bdiv . addActionListener ( new ActionListener () {

public void actionPerformed ( ActionEvent e ) {

if ( jtf . getText (). equals ( "Enter two operands!" ) ||

jtf . getText (). equals ( "Not defined!" ))

jtf . setText ( "" );

jtf . setText ( jtf . getText () + "/" );

}

});

beq . addActionListener ( new ActionListener () {

public void actionPerformed ( ActionEvent e ) {

try {

String S = jtf . getText ();

int i = 0 ;

char b = S . charAt ( i );

while ( b != '+' && b != '-' && b != 'X' && b != '/' && b != '%' )

{

i ++;

b = S . charAt ( i );

}

Float x , y , ans = 0f ;

x = Float . parseFloat ( S . substring ( 0 , i ));

y = Float . parseFloat ( S . substring ( i + 1 , S . length ()));

if ( b == '+' ) {

ans = x + y ;

} else if ( b == '-' ) {

ans = x - y ;

} else if ( b == 'X' ) {

ans = x \* y ;

} else if ( b == '/' ) {

ans = x / y ;

}

if ( b == '/' && y == 0 ) {

jtf . setText ( "Not defined!" );

} else {

jtf . setText ( ans + "" );

}

} catch ( Exception ex ) {

jtf . setText ( "Enter two operands!" );

}

}

});

}

public static void main ( String [] args ) {

new calculator ();

}

}