*Assignment 3 pseudocode*

1. import javafx.application.Applicatio  
   import javafx.scene.control.Button  
   import javafx.scene.layout.GridPane  
   import javafx.scene.control.Label  
   import javafx.scene.control.TextField  
   import javafx.scene.Scene  
   import javafx.stage.Stage   
   import javafx.event.ActionEvent  
   import javafx.event.EventHandler  
   import javafx.geometry.Pos  
     
   CLASS Calculator extends Application   
   BEGIN  
    METHOD start(Stage primaryStage)  
    BEGIN

CREATE tf1 AS TextField  
 tf1🡨NEW TextField("")

CREATE bt1 AS Button

bt1🡨NEW Button("1")

CREATE bt2 AS Button  
 bt2🡨NEW Button("2")

CREATE bt3 AS Button  
 bt3🡨NEW Button("3")

CREATE bt4 AS Button  
 bt4🡨NEW Button("/")

CREATE bt5 AS Button  
 bt5🡨NEW Button("4")

CREATE bt6 AS Button  
 bt6🡨NEW Button("5")

CREATE bt7 AS Button  
 bt7🡨NEW Button("6")

CREATE bt8 AS Button  
 bt8🡨NEW Button("\*")

CREATE bt9 AS Button  
 bt9🡨NEW Button("7")

CREATE bt10 AS Button  
 bt10🡨NEW Button("8")

CREATE bt11 AS Button  
 bt11🡨NEW Button("9")

CREATE bt12 AS Button  
 bt12🡨NEW Button("+")

CREATE bt13 AS Button  
 bt13🡨NEW Button("-")

CREATE bt14 AS Button

bt14🡨NEW Button(“=”)

CREATE Gpane AS GridPane  
 Gpane🡨NEW GridPane()

Gpane.setHgap(10)  
 Gpane.setVgap(10)  
 Gpane.setAlignment(Pos.CENTER)

Gpane.add(tf1,0,0,3,1)  
   
 Gpane.add(bt1, 0, 2)  
 Gpane.add(bt2,1,2)  
 Gpane.add(bt3,2,2)  
 Gpane.add(bt4,3,2)  
 Gpane.add(bt8,4,2)  
   
 Gpane.add(bt5,0,3)  
 Gpane.add(bt6,1,3)  
 Gpane.add(bt7,2,3)  
 Gpane.add(bt12,3,3)  
 Gpane.add(bt13,4,3)  
   
 Gpane.add(bt9,0,4)  
 Gpane.add(bt10,1,4)  
 Gpane.add(bt11,2,4)  
 Gpane.add(bt14,3,4)

CREATE scene AS Scene  
 scene🡨new Scene(Gpane,200,200)

CREATE e AS EventHandler<ActionEvent>  
 e🡨NEW EventHandler<ActionEvent>()

BEGIN  
 METHOD handle(ActionEvent e)  
 BEGIN

float number🡨0f

String op🡨””  
 IF(e.getSource().equals(bt1))THEN  
 BEGIN  
 SET tf1 AS tf1.getText()+”1”  
 ELSE IF(e.getSource().equals(bt2))  
 SET tf1 AS tf1.getText()“2”  
 ELSE IF(e.getSource().equals(bt3))  
 SET tf1 AS tf1.getText()+“3”  
 ELSE IF(e.getSource().equals(bt5))  
 SET tf1 AS tf1.getText()+“4”  
 ELSE IF(e.getSource().equals(bt6))  
 SET tf1 AS tf1.getText()+“5”  
 ELSE IF(e.getSource().equals(bt7))  
 SET tf1 AS tf1.getText()+“6”  
 ELSE IF(e.getSource().equals(bt9))  
 SET tf1 AS tf1.getText()+“7”  
 ELSE IF(e.getSource().equals(bt10))  
 SET tf1 AS tf1.getText()+“8”  
 ELSE IF(e.getSource().equals(bt11))  
 SET tf1 AS tf1.getText()+“9”

ELSE IF(e.getSource().equals(bt4))  
 number1🡨Float.parseFloat(GET text tf1)

op🡨”/”

SET tf1 AS “”

ELSE IF(e.getSource().equals(bt8))  
 number1🡨Float.parseFloat(GET text tf1)

op🡨”\*”

SET tf1 AS “”

ELSE IF(e.getSource().equals(bt12))  
 number1🡨Float.parseFloat(GET text tf1)

op🡨”+”

SET tf1 AS “”

ELSE IF(e.getSource().equals(bt13))  
 number1🡨Float.parseFloat(GET text tf1)

op🡨”-”

SET tf1 AS “”

ELSE (e.getSource().equals(bt14))  
 float number2=Float.parseFloat(GET text tf1)

IF(op==”/”)THEN

float answer=number1/number2

SET tf1 AS “”+answer

ELSE IF (op==”\*”)

Float answer=number1\*number2

SET tf1 AS “”+answer

ELSE IF(op==”+”)

Float answer=number1+number2

SET tf1 AS “”+answer

ELSE

Float answer=number1-number2

SET tf1 AS “”+answer

END IF

END IF

END METHOD

END EventHandler<ActionEvent>

SET Action bt1 on e  
 SET Action bt2 on e

SET Action bt3 on e

SET Action bt5 on e

SET Action bt6 on e

SET Action bt7 on e

SET Action bt9 on e

SET Action bt10 on e

SET Action bt11 on e

SET Action bt4 on e

SET Action bt8 on e

SET Action bt12 on e

SET Action bt13 on e

SET Action bt14 on e

SET Title of primaryStage AS “Calculator”  
 SET Scene of primaryStage AS scene  
 SHOW primaryStage

END Start()  
 METHOD Main(String [] args)  
 BEGIN  
 LAUNCH args

END Main()

END CLASS