



Green University of Bangladesh
Department of Computer Science and Engineering (CSE)
Faculty of Science and Engineering
Semester: (Summer, Year:2021), B.Sc. in CSE (Day)

Course Title: Object Oriented Programming Lab
Course Code: CSE 202 Section: PC-202 D,

Student Details

Name	ID
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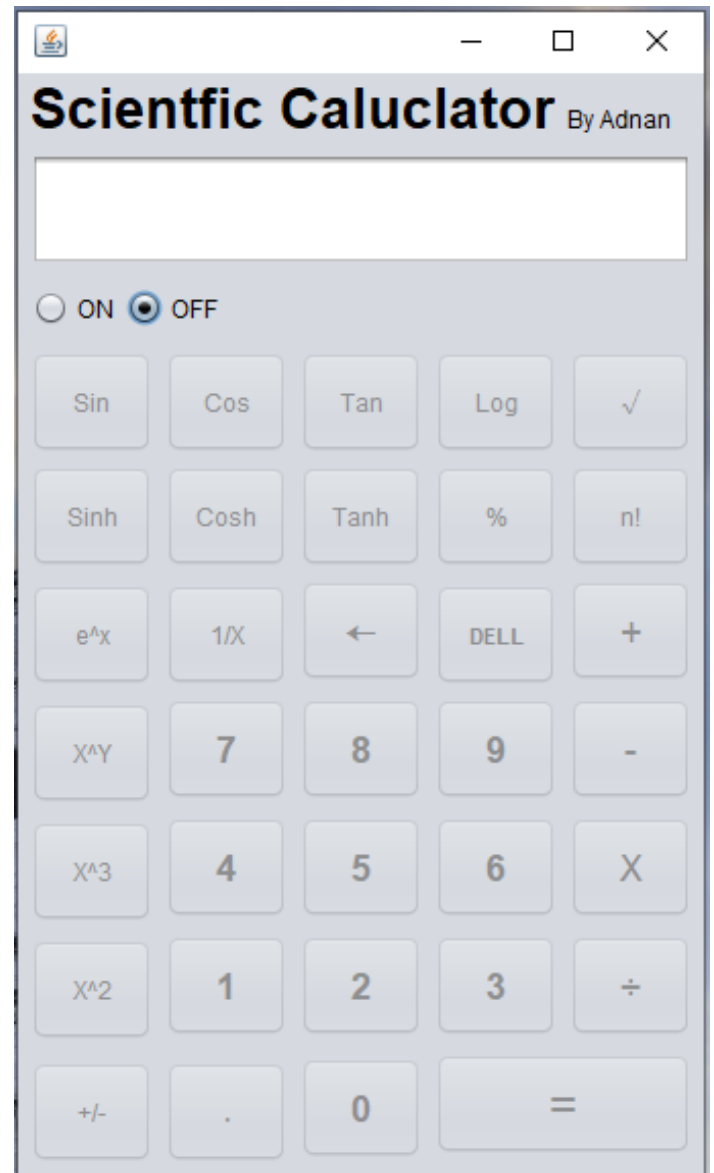
Lab Date : 12/08/2021
Submission Date : 18/08/2021
Course Teacher's Name : Md. Solaiman Mia

“A scientific Calculator”

Turned on condition ↓



Turned off condition ↓



Source Code:

```
1 public class adnan extends javax.swing.JFrame {
2     double first;
3     double second;
4     double result;
5     String operations;
6     String answer;
7
8     /**
9      * Creates new form adnan
10     */
11     public adnan() {
12         initComponents();
13     }
14
15     /**
16      * This method is called from within the constructor to initialize the form.
17      * WARNING: Do NOT modify this code. The content of this method is always
18      * regenerated by the Form Editor.
19     */
20     @SuppressWarnings("unchecked")
21     Generated Code
22
23
24
25     private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
26         btn1.setEnabled(false);
27         btn2.setEnabled(false);
28         btn3.setEnabled(false);
29         btn4.setEnabled(false);
30         btn5.setEnabled(false);
31         btn6.setEnabled(false);
32         btn7.setEnabled(false);
33         btn8.setEnabled(false);
34         btn9.setEnabled(false);
35         btn10.setEnabled(false);
36         btn11.setEnabled(false);
37         btn12.setEnabled(false);
38         btn13.setEnabled(false);
39         btn15.setEnabled(false);
40         btn16.setEnabled(false);
41         btn17.setEnabled(false);
42         btn18.setEnabled(false);
43         btn19.setEnabled(false);
44         btn20.setEnabled(false);
45         btn21.setEnabled(false);
46         btn22.setEnabled(false);
47         btn23.setEnabled(false);
48         btn24.setEnabled(false);
49         btn25.setEnabled(false);
50         btn26.setEnabled(false);
51     }
```

```

551     btn27.setEnabled(false);
552     btn28.setEnabled(false);
553     btn29.setEnabled(false);
554     btn30.setEnabled(false);
555     btn31.setEnabled(false);
556     btn33.setEnabled(false);
557     btnDot.setEnabled(false);
558     btn35.setEnabled(false);
559     btn36.setEnabled(false);
560 }
561
562 private void btn30ActionPerformed(java.awt.event.ActionEvent evt) {
563     String Enternumber = jTextField.getText() + btn30.getText();
564     jTextField.setText(Enternumber);
565 }
566
567 private void btn26ActionPerformed(java.awt.event.ActionEvent evt) {
568     String Enternumber = jTextField.getText() + btn26.getText();
569     jTextField.setText(Enternumber);
570 }
571
572 private void btn29ActionPerformed(java.awt.event.ActionEvent evt) {
573     String Enternumber = jTextField.getText() + btn29.getText();
574     jTextField.setText(Enternumber);
575 }
576
577 private void btn22ActionPerformed(java.awt.event.ActionEvent evt) {
578     String Enternumber = jTextField.getText() + btn22.getText();
579     jTextField.setText(Enternumber);
580 }
581
582 private void btn24ActionPerformed(java.awt.event.ActionEvent evt) {
583     String Enternumber = jTextField.getText() + btn24.getText();
584     jTextField.setText(Enternumber);
585 }
586
587 private void btn25ActionPerformed(java.awt.event.ActionEvent evt) {
588     String Enternumber = jTextField.getText() + btn25.getText();
589     jTextField.setText(Enternumber);
590 }
591
592 private void btn17ActionPerformed(java.awt.event.ActionEvent evt) {
593     String Enternumber = jTextField.getText() + btn17.getText();
594     jTextField.setText(Enternumber);
595 }
596
597 private void btn20ActionPerformed(java.awt.event.ActionEvent evt) {
598     String Enternumber = jTextField.getText() + btn20.getText();
599     jTextField.setText(Enternumber);
600 }
601
602 private void btn18ActionPerformed(java.awt.event.ActionEvent evt) {
603     String Enternumber = jTextField.getText() + btn18.getText();
604     jTextField.setText(Enternumber);
605 }

```

```

606
607 private void btn15ActionPerformed(java.awt.event.ActionEvent evt) {
608     jText.setText(" ");
609 }
610
611 private void btn16ActionPerformed(java.awt.event.ActionEvent evt) {
612     first = Double.parseDouble(jText.getText());
613     jText.setText(" ");
614     operations="+";
615 }
616
617 private void btn23ActionPerformed(java.awt.event.ActionEvent evt) {
618     first = Double.parseDouble(jText.getText());
619     jText.setText(" ");
620     operations="-";
621 }
622
623 private void btn28ActionPerformed(java.awt.event.ActionEvent evt) {
624     first = Double.parseDouble(jText.getText());
625     jText.setText(" ");
626     operations="*";
627 }
628
629 private void btn36ActionPerformed(java.awt.event.ActionEvent evt) {
630     first = Double.parseDouble(jText.getText());
631     jText.setText(" ");
632     operations="/";
633 }
634
635 private void btn33ActionPerformed(java.awt.event.ActionEvent evt) {
636     String answer;
637     second=Double.parseDouble(jText.getText());
638     if (operations=="+") {
639         result=first+second;
640         answer=String.format("%.0f", result);
641         jText.setText(answer);
642     }
643     else if (operations=="-") {
644         result=first-second;
645         answer=String.format("%.0f", result);
646         jText.setText(answer);
647     }
648     else if (operations=="/") {
649         result=first/second;
650         answer=String.format("%.0f", result);
651         jText.setText(answer);
652     }
653     else if (operations=="*") {
654         result=first*second;
655         answer=String.format("%.0f", result);
656         jText.setText(answer);
657     }
658     else if (operations=="%")
659     {
660         result=first%second;

```

```

661         answer=String.format("%.2f", result);
662         jText.setText(answer);
663     }
664     else if(operations=="X^Y")
665     {
666         double resultt=1;
667         for(int i=0;i<second;i++)
668         {
669             resultt=first*resultt;
670             answer=String.format("%.2f", resultt);
671             jText.setText(answer);
672         }
673     }
674 }
675
676 private void btn6ActionPerformed(java.awt.event.ActionEvent evt) {
677     double a = Math.sinh(Double.parseDouble(jText.getText()));
678     jText.setText(" ");
679     jText.setText(jText.getText()+a);
680 }
681
682 private void btn7ActionPerformed(java.awt.event.ActionEvent evt) {
683     double a = Math.cosh(Double.parseDouble(jText.getText()));
684     jText.setText(" ");
685     jText.setText(jText.getText()+a);
686 }
687
688 private void btn8ActionPerformed(java.awt.event.ActionEvent evt) {
689     double a = Math.tanh(Double.parseDouble(jText.getText()));
690     jText.setText(" ");
691     jText.setText(jText.getText()+a);
692 }
693
694 private void btn1ActionPerformed(java.awt.event.ActionEvent evt) {
695     double a = Math.sin(Double.parseDouble(jText.getText()));
696     jText.setText(" ");
697     jText.setText(jText.getText()+a);
698 }
699
700 private void btn2ActionPerformed(java.awt.event.ActionEvent evt) {
701     double a = Math.cos(Double.parseDouble(jText.getText()));
702     jText.setText(" ");
703     jText.setText(jText.getText()+a);
704 }
705
706 private void btn3ActionPerformed(java.awt.event.ActionEvent evt) {
707     double a = Math.tan(Double.parseDouble(jText.getText()));
708     jText.setText(" ");
709     jText.setText(jText.getText()+a);
710 }
711
712 private void btnDotActionPerformed(java.awt.event.ActionEvent evt) {
713     String number=jText.getText()+btnDot.getText();
714     jText.setText(number);
715 }

```



```

716
717 private void btn19ActionPerformed(java.awt.event.ActionEvent evt) {
718     first=Double.parseDouble(jText.getText());
719     jText.setText("");
720     operations="X^Y";
721 }
722
723 private void btn9ActionPerformed(java.awt.event.ActionEvent evt) {
724     first=Double.parseDouble(jText.getText());
725     jText.setText("");
726     operations="%";
727 }
728
729 private void btn35ActionPerformed(java.awt.event.ActionEvent evt) {
730     String Enternumber = jText.getText()+ btn35.getText();
731     jText.setText(Enternumber);
732 }
733
734 private void btn4ActionPerformed(java.awt.event.ActionEvent evt) {
735     double a = Math.log(Double.parseDouble(jText.getText()));
736     jText.setText("");
737     jText.setText(jText.getText()+a);
738 }
739
740 private void btn21ActionPerformed(java.awt.event.ActionEvent evt) {
741     double a = (Double.parseDouble(jText.getText()));
742     a=a*a*a;
743     jText.setText("");
744     jText.setText(jText.getText()+a);
745 }
746
747 private void btn13ActionPerformed(java.awt.event.ActionEvent evt) {
748     double a = Math.exp(Double.parseDouble(jText.getText()));
749     jText.setText("");
750     jText.setText(jText.getText()+a);
751 }
752
753 private void btn11ActionPerformed(java.awt.event.ActionEvent evt) {
754     double a =1/ Math.sqrt(Double.parseDouble(jText.getText()));
755     jText.setText("");
756     jText.setText(jText.getText()+a);
757 }
758
759 private void btn5ActionPerformed(java.awt.event.ActionEvent evt) {
760     double a = Math.sqrt(Double.parseDouble(jText.getText()));
761     jText.setText("");
762     jText.setText(jText.getText()+a);
763 }
764
765 private void btn27ActionPerformed(java.awt.event.ActionEvent evt) {
766     double a = (Double.parseDouble(jText.getText()));
767     a=a*a;
768     jText.setText("");
769     jText.setText(jText.getText()+a);

```

```

770     }
771
772     private void btn10ActionPerformed(java.awt.event.ActionEvent evt) {
773         double a = (Double.parseDouble(jText.getText()));
774         double f=1;
775         while(a!=0)
776         {
777             f=f*a;
778             a--;
779         }
780         jText.setText("");
781         jText.setText(jText.getText()+f);
782     }
783
784     private void btn31ActionPerformed(java.awt.event.ActionEvent evt) {
785         double a=Double.parseDouble(String.valueOf(jText.getText()));
786         a=a*(-1);
787         jText.setText(String.valueOf(a));
788     }
789
790     private void jRadioButton1ActionPerformed(java.awt.event.ActionEvent evt) {
791         btn1.setEnabled(true);
792         btn2.setEnabled(true);
793         btn3.setEnabled(true);
794         btn4.setEnabled(true);
795         btn5.setEnabled(true);
796         btn6.setEnabled(true);
797         btn7.setEnabled(true);
798         btn8.setEnabled(true);
799         btn9.setEnabled(true);
800         btn10.setEnabled(true);
801         btn11.setEnabled(true);
802         btn12.setEnabled(true);
803         btn13.setEnabled(true);
804         btn15.setEnabled(true);
805         btn16.setEnabled(true);
806         btn17.setEnabled(true);
807         btn18.setEnabled(true);
808         btn19.setEnabled(true);
809         btn20.setEnabled(true);
810         btn21.setEnabled(true);
811         btn22.setEnabled(true);
812         btn23.setEnabled(true);
813         btn24.setEnabled(true);
814         btn25.setEnabled(true);
815         btn26.setEnabled(true);
816         btn27.setEnabled(true);
817         btn28.setEnabled(true);
818         btn29.setEnabled(true);
819         btn30.setEnabled(true);
820         btn31.setEnabled(true);
821         btn33.setEnabled(true);
822         btnDot.setEnabled(true);
823         btn35.setEnabled(true);
824         btn36.setEnabled(true);

```



```

825 }
826
827 private void btn12ActionPerformed(java.awt.event.ActionEvent evt) {
String backSpace=null;
829 if(jText.getText().length()>0)
830 {
831     StringBuilder str=new StringBuilder(jText.getText());
832     str.deleteCharAt(jText.getText().length()-1);
833     backSpace=str.toString();
834     jText.setText(backSpace);
835 }
836 }

```

```

837
838 /**
839  * @param args the command line arguments
840  */
841 public static void main(String args[]) {
842     /* Set the Nimbus look and feel */
843     Look and feel setting code (optional)
844
845     /* Create and display the form */
846     java.awt.EventQueue.invokeLater(new Runnable() {
847         public void run() {
848             new adnan().setVisible(true);
849         }
850     });
851 }

```

```

// Variables declaration - do not modify

```

```

874 private javax.swing.JButton btn1;
875 private javax.swing.JButton btn10;
876 private javax.swing.JButton btn11;
877 private javax.swing.JButton btn12;
878 private javax.swing.JButton btn13;
879 private javax.swing.JButton btn15;
880 private javax.swing.JButton btn16;
881 private javax.swing.JButton btn17;
882 private javax.swing.JButton btn18;
883 private javax.swing.JButton btn19;
884 private javax.swing.JButton btn2;
885 private javax.swing.JButton btn20;
886 private javax.swing.JButton btn21;
887 private javax.swing.JButton btn22;
888 private javax.swing.JButton btn23;
889 private javax.swing.JButton btn24;
890 private javax.swing.JButton btn25;
891 private javax.swing.JButton btn26;
892 private javax.swing.JButton btn27;
893 private javax.swing.JButton btn28;
894 private javax.swing.JButton btn29;
895 private javax.swing.JButton btn3;
896 private javax.swing.JButton btn30;
897 private javax.swing.JButton btn31;
898 private javax.swing.JButton btn33;

```

```
899     private javax.swing.JButton btn35;
900     private javax.swing.JButton btn36;
901     private javax.swing.JButton btn4;
902     private javax.swing.JButton btn5;
903     private javax.swing.JButton btn6;
904     private javax.swing.JButton btn7;
905     private javax.swing.JButton btn8;
906     private javax.swing.JButton btn9;
907     private javax.swing.JButton btnDot;
908     private javax.swing.JButton jButton4;
909     private javax.swing.JLabel jLabel1;
910     private javax.swing.JLabel jLabel2;
911     private javax.swing.JRadioButton jRadioButton1;
912     private javax.swing.JRadioButton jRadioButton2;
913     private javax.swing.JTextField jText;
914     // End of variables declaration
915 }
916
```

 adnan >  main >  Runnable >

Design:



Scientific Caluclator

By Adnan

☐ ON ☐ OFF

Sin	Cos	Tan	Log	√
Sinh	Cosh	Tanh	%	n!
e^x	1/X	←	DELL	+
X^Y	7	8	9	-
X^3	4	5	6	X
X^2	1	2	3	÷
+/-	.	0	=	

**THANK
YOU**

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