

Scientific Calculator

Ui

```
<apex:page controller="mock">
```

```
<style>
```

```
  .calculator{  
    width:300px;  
    border:1px solid #ccc;  
    border-radius:5px;  
    margin:10px auto;
```

```
  }
```

```
  .display{  
    width:270px;  
    height:40px;  
    margin:auto;  
    text-align:right;  
    border:1px solid #ccc;  
    border-radius:5px;  
  }
```

```
</style>
```

```
<div class="calculator">
```

```
<apex:form>
```

```
<apex:outputPanel id='displayPanel'>
```

```
  <div class="display">
```

```
    <apex:outputText value="{!displayVal}"/>
```

```
  </div>
```

```

<div class='button-row'>

    <apex:commandButton action="{!numButtonClicked}" value="1" reRender="displayPanel"
immediate="true" style="width: 40px; height:40px; margin:10px;">

        <apex:param value="1" assignTo="{!buttonVal}" name="buttonVal"></apex:param>

    </apex:commandButton>

    <apex:commandButton action="{!numButtonClicked}" value="2" reRender="displayPanel"
immediate="true" style="width: 40px; height:40px; margin:10px;">

        <apex:param value="2" assignTo="{!buttonVal}" name="buttonVal"></apex:param>

    </apex:commandButton>

    <apex:commandButton action="{!numButtonClicked}" value="3" reRender="displayPanel"
immediate="true" style="width: 40px; height:40px; margin:10px;">

        <apex:param value="3" assignTo="{!buttonVal}" name="buttonVal"></apex:param>

    </apex:commandButton>

    <apex:commandButton action="{!operatorButtonClicked}" value="+"
reRender="displayPanel" immediate="true" style="width: 40px; height:40px; margin:10px;">

        <apex:param value="+" assignTo="{!buttonVal}" name="buttonVal"></apex:param>

    </apex:commandButton>

</div>

<div class='button-row'>

    <apex:commandButton action="{!numButtonClicked}" value="4" reRender="displayPanel"
immediate="true" style="width: 40px; height:40px; margin:10px;">

        <apex:param value="4" assignTo="{!buttonVal}" name="buttonVal"></apex:param>

    </apex:commandButton>

    <apex:commandButton action="{!numButtonClicked}" value="5" reRender="displayPanel"
immediate="true" style="width: 40px; height:40px; margin:10px;">

        <apex:param value="5" assignTo="{!buttonVal}" name="buttonVal"></apex:param>

    </apex:commandButton>

    <apex:commandButton action="{!numButtonClicked}" value="6" reRender="displayPanel"
immediate="true" style="width: 40px; height:40px; margin:10px;">

        <apex:param value="6" assignTo="{!buttonVal}" name="buttonVal"></apex:param>

    </apex:commandButton>

```

```
<apex:commandButton action="{!operatorButtonClicked}" value="*"
reRender="displayPanel" immediate="true" style="width: 40px; height:40px; margin:10px;">
```

```
<apex:param value="*" assignTo="{!buttonVal}" name="buttonVal"></apex:param>
```

```
</apex:commandButton>
```

```
</div>
```

```
<div class="button-row">
```

```
<apex:commandButton action="{!clearButtonClicked}" value="C" reRender="displayPanel"
immediate="true" style="width: 40px; height:40px; margin:10px;"/>
```

```
<apex:commandButton action="{!equalsButtonClicked}" value="=" reRender="displayPanel"
immediate="true" style="width: 40px; height:40px; margin:10px;"/>
```

```
<apex:commandButton action="{!sqrtButtonClicked}" value="sqrt" reRender="displayPanel"
immediate="true" style="width: 40px; height:40px; margin:10px;"/>
```

```
</div>
```

```
<div class="button-row">
```

```
<apex:commandButton action="{!sinButtonClicked}" value="sin" reRender="displayPanel"
immediate="true" style="width: 40px; height:40px; margin:10px;"/>
```

```
<apex:commandButton action="{!cosButtonClicked}" value="cos" reRender="displayPanel"
immediate="true" style="width: 40px; height:40px; margin:10px;"/>
```

```
<apex:commandButton action="{!tanButtonClicked}" value="tan" reRender="displayPanel"
immediate="true" style="width: 40px; height:40px; margin:10px;"/>
```

```
</div>
```

```
</apex:outputPanel>
```

```
</apex:form>
```

```
</div>
```

```
</apex:page>
```

Code:

```
public class mock {  
    public String operand1{get;set;}  
    public String operand2{get;set;}  
    public String operator{get;set;}  
    public string displayVal{get;set;}  
    public string buttonVal{get;set;}  
  
    public mock()  
    {  
        operand1="";  
        operand2="";  
        operator="";  
        displayVal='0';  
    }  
  
    public void numButtonClicked()  
    {  
        if(displayVal=='0')  
        {  
            displayVal=buttonVal;  
        }  
        else  
        {  
            displayVal+=buttonVal;  
        }  
    }  
  
    public void operatorButtonClicked()
```

```
{  
    if(displayVal!="")  
    {  
        operand1=displayVal;  
        operator=buttonVal;  
        displayVal='0';  
    }  
}
```

```
public void equalsButtonClicked()  
{  
    operand2=displayVal;  
    if(operand1!=" && operator!=" && operand2!=")  
    {  
        if(operator=='+')  
        {  
            displayVal=String.valueOf(Double.valueOf(operand1)+Double.valueOf(operand2));  
        }  
        if(operator=='-')  
        {  
            displayVal=String.valueOf(Double.valueOf(operand1)-Double.valueOf(operand2));  
        }  
        if(operator=='*')  
        {  
            displayVal=String.valueOf(Double.valueOf(operand1)*Double.valueOf(operand2));  
        }  
        if(operator=='/')  
        {  
            displayVal=String.valueOf(Double.valueOf(operand1)/Double.valueOf(operand2));  
        }  
    }  
}
```

```
operator="";  
operand1="";  
operand2="";  
}
```

```
public void clearButtonClicked()  
{  
    displayVal='0';  
    operand1="";  
    operator="";  
    operand2="";  
}
```

```
public void sqrtButtonClicked()  
{  
    displayVal=String.valueOf(Math.sqrt(Double.valueOf(displayVal)));  
}
```

```
public void sqrButtonClicked()  
{  
    displayVal=String.valueOf(Math.pow(Double.valueOf(displayVal),2));  
}
```

```
public void tanButtonClicked()  
{  
    double degrees=Double.valueOf(displayVal);  
    double radians=degrees*Math.PI/180;  
    displayVal=String.valueOf(Math.tan(radians));  
}
```

```
public void sinButtonClicked()
{
    double degrees=Double.valueOf(displayVal);
    double radians=degrees*Math.PI/180;
    displayVal=String.valueOf(Math.sin(radians));
}

public void cosButtonClicked()
{
    double degrees=Double.valueOf(displayVal);
    double radians=degrees*Math.PI/180;
    displayVal=String.valueOf(Math.cos(radians));
}
}
```