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BCS3283-Mobile Application Development

Chapter 6 Change Listener

Editor

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Change Listener

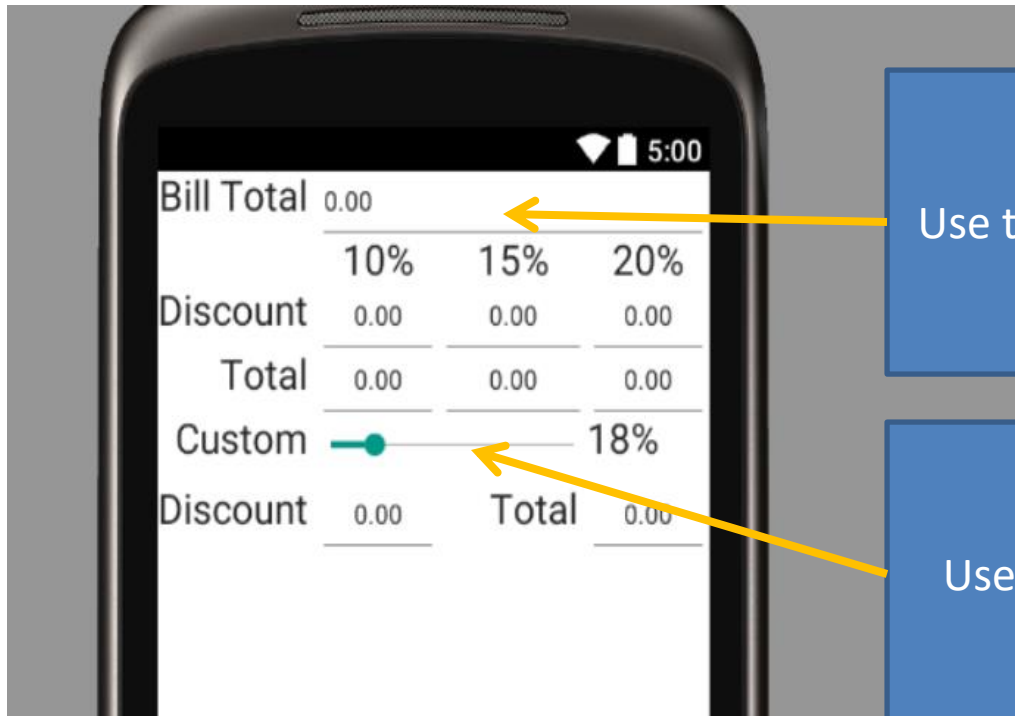
- Aims

To learn how to program `addTextChangedListener` and `setOnSeekBarChangeListener`.

- Expected Outcomes

- Ability to create `addTextChangedListener`.
- Ability to create `setOnSeekBarChangeListener`.
- Ability to manage and edit GUI using Java Activity.

Discount APP



addTextChangedListener

Use to detect any change inside of EditText and response to it

setOnSeekBarChangeListener

Use to detect movement in SeekBar and response to it

Programming for Discount Calculator

- Import Libraries

```
import android.support.v7.app.ActionBarActivity;  
import android.os.Bundle;  
import android.text.Editable;  
import android.text.TextWatcher;  
import android.view.Menu;  
import android.view.MenuItem;  
import android.widget.EditText;  
import android.widget.SeekBar;  
import android.widget.TextView;
```



Objects and Variables declaration

```
public class DiscountCalculator extends ActionBarActivity {  
  
    double currentBillTotal; // bill amount entered by the user  
    int currentCustomPercent;  
  
    EditText billEditText, discount10EditText, discount15EditText, discount20EditText, total10EditText, total15EditText,  
        total20EditText, discountCustomEditText, totalCustomEditText ;  
    TextView customDiscountTextView;  
    SeekBar customSeekBar;
```



Link Java Objects with widgets

```
setContentView(R.layout.main);
```

```
currentBillTotal = 0.0; // initialize the bill amount to zero  
currentCustomPercent = 18; // initialize the custom discount to 18%
```

```
billEditText=(EditText) findViewById(R.id.billEditText);  
discount10EditText=(EditText) findViewById(R.id.discount10EditText);  
discount15EditText=(EditText) findViewById(R.id.discount15EditText);  
discount20EditText=(EditText) findViewById(R.id.discount20EditText);  
total10EditText=(EditText) findViewById(R.id.total10EditText);  
total15EditText=(EditText) findViewById(R.id.total15EditText);  
total20EditText=(EditText) findViewById(R.id.total20EditText);  
discountCustomEditText=(EditText) findViewById(R.id.discountCustomEditText);  
totalCustomEditText=(EditText) findViewById(R.id.totalCustomEditText);  
customDiscountTextView=(TextView) findViewById(R.id.customDiscountTextView);  
customSeekBar=(SeekBar) findViewById(R.id.customSeekBar);
```



Create addTextChangedListener and add codes inside afterTextChanged function

```
billEditText.addTextChangedListener(new TextWatcher() {  
    @Override  
    public void beforeTextChanged(CharSequence s, int start, int count, int after) {  
  
    }  
  
    @Override  
    public void onTextChanged(CharSequence s, int start, int before, int count) {  
  
    }  
  
    @Override  
    public void afterTextChanged(Editable s) {  
  
        currentBillTotal = Double.parseDouble(s.toString());  
        updateStandard(); // update the 10, 15 and 20% EditTexts  
        updateCustom(); // update the custom discount EditTexts  
  
    }  
});
```



Create setOnSeekBarChangeListener and add codes inside onProgressChanged function

```
customSeekBar.setOnSeekBarChangeListener(new SeekBar.OnSeekBarChangeListener() {  
    @Override  
    public void onProgressChanged(SeekBar seekBar, int progress, boolean fromUser) {  
        // sets currentCustomPercent to position of the SeekBar's thumb  
        currentCustomPercent = seekBar.getProgress();  
        updateCustom(); // update EditTexts for custom discount and total  
    }  
  
    @Override  
    public void onStartTrackingTouch(SeekBar seekBar) {  
  
    }  
  
    @Override  
    public void onStopTrackingTouch(SeekBar seekBar) {  
  
    }  
});
```



Function update Standard definition

```
private void updateStandard()
{
    // calculate bill total with a ten percent discount
    double tenPercentDiscount = currentBillTotal * .1;
    double tenPercentTotal = currentBillTotal + tenPercentDiscount;

    // set discountTenEditText's text to tenPercentDiscount
    discount10EditText.setText(String.format("%.02f", tenPercentDiscount));

    // set totalTenEditText's text to tenPercentTotal
    total10EditText.setText(String.format("%.02f", tenPercentTotal));

    // calculate bill total with a fifteen percent discount
    double fifteenPercentDiscount = currentBillTotal * .15;
    double fifteenPercentTotal = currentBillTotal + fifteenPercentDiscount;

    // set discountFifteenEditText's text to fifteenPercentDiscount
    discount15EditText.setText(String.format("%.02f", fifteenPercentDiscount));

    // set totalFifteenEditText's text to fifteenPercentTotal
    total15EditText.setText(String.format("%.02f", fifteenPercentTotal));

    // calculate bill total with a twenty percent discount
    double twentyPercentDiscount = currentBillTotal * .20;
    double twentyPercentTotal = currentBillTotal + twentyPercentDiscount;

    // set discountTwentyEditText's text to twentyPercentDiscount
    discount20EditText.setText(String.format("%.02f", twentyPercentDiscount));

    // set totalTwentyEditText's text to twentyPercentTotal
    total20EditText.setText(String.format("%.02f", twentyPercentTotal));
    // total20EditText.setText(Double.toString(twentyPercentDiscount));
} // end method updateStandard
```



Function update Custom definition

```
private void updateCustom()
{
    // set customDiscountTextView's text to match the position of the SeekBar
    customDiscountTextView.setText(currentCustomPercent + "%");

    // calculate the custom discount amount
    double customDiscountAmount = currentBillTotal * currentCustomPercent * .01;

    // calculate the total bill, including the custom discount
    double customTotalAmount = currentBillTotal + customDiscountAmount;

    // display the discount and total bill amounts
    discountCustomEditText.setText(String.format("%.02f", customDiscountAmount));
    totalCustomEditText.setText(String.format("%.02f", customTotalAmount));
} // end method updateCustom
```

