

ElectricCarFinancing [C:\Users\Nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\MainActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src main java edu

[app] C:\Users\Nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing\app\src\main\java\edu\udayton\electriccarfinancing\PaymentActivity.java

1:Project

Resource Manager

Gradle

activity_main.xml activity_payment.xml PaymentActivity.java MainActivity.java

app manifests java edu.udayton.electriccarfinancing MainActivity PaymentActivity

edu.udayton.electriccarfinancing (androidTest) edu.udayton.electriccarfinancing (test)

generatedJava res drawable layout mipmap values colors.xml dimens.xml strings.xml styles.xml

Gradle Scripts

Layout Captures

2:Structure

2:Favorites

Build Variants

MainActivity > onCreate()

```
135 // write persistent data to the SharedPreferences object
136
137 SharedPreferences.Editor editor = sharedPref.edit();
138
139 editor.putInt(YEARS_KEY, numberOfYears);
140 editor.putFloat(LOAN_KEY, loanAmount);
141 editor.putFloat(RATE_KEY, interestRate);
142
143 editor.commit();
144
145 // start the payment activity via an explicit Intent
146
147 Intent intent = new Intent(MainActivity.this, PaymentActivity.class);
148 startActivity(intent);
149 } // end onClick handler
150
151
152 // set the btnPaymentListener
153 btnPayment.setOnClickListener(
154 } // end onCreate method
155
156 // method displays persistent numb
157 private void showCurrentYears()
158 {
159     final Spinner yearsSpinner =
160     numberOfYears = sharedPref.get
161
162     if (numberOfYears > DEFAULT_YE
163     {
164         // convert number of years to (zero-based) yearsSpinner position (index)
165         int yearsIndex = numberOfYears - NUMBER_OF_TERMS;
166
167         // set the yearsSpinner selection based on yearsIndex
168         yearsSpinner.setSelection(yearsIndex);
169     }
170 } // end showCurrentYears method
171
172 // method displays persistent loan amount if present
173 private void showCurrentLoan()
174 {
175     final EditText txtLoan = (EditText)findViewById(R.id.txtLoan);
176
177     loanAmount = sharedPref.getFloat(LOAN_KEY, DEFAULT_LOAN);
178
179     if (loanAmount > DEFAULT_LOAN) // if the loan amount had been previously stored:
180     {
181         txtLoan.setText(Float.toString(loanAmount));
182     }
183 }
```

In Part 3 of this lesson, we added the Java code to MainActivity, so that it uses the app's default SharedPreferences file to transmit the input data to the PaymentActivity, and also displays any previously-entered data using the same SharedPreferences file.

In this part of Lesson 7, we add code to PaymentActivity.java that retrieves the input data from the SharedPreferences file, calculates and displays the monthly payment amount, and shows the number of years as one of three images.

Finally, we test the app using the Android Studio emulator with the Nexus 5 system image.

Device File Explorer

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\MainActivity.java [app] - Android Studio

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ElectricCarFinancing app src main java edu

[app] C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing\app\src\main\java\edu\udayton\electriccarfinancing\PaymentActivity.java

1:Project Resource Manager Layout Captures Z:Structure Favorites Build Variants Device File Explorer

Android

app

- manifests
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 - edu.udayton.electriccarfinancing
 - MainActivity
 - PaymentActivity
- generatedJava
- res
 - drawable
 - layout
 - mipmap
 - values
 - colors.xml
 - dimens.xml
 - strings.xml
 - styles.xml

Gradle Scripts

activity_main.xml activity_payment.xml PaymentActivity.java MainActivity.java

```
135 // write persistent data to the SharedPreferences object
136
137 SharedPreferences sharedPref = getSharedPreferences("com.udayton.electriccarfinancing", MODE_PRIVATE);
138 editor = sharedPref.edit();
139 editor.putInt(YEARS_KEY, numberOfYears);
140 editor.putInt(LOAN_KEY, loanAmount);
141 editor.putFloat(RATE_KEY, interestRate);
142
143 editor.commit();
144
145 // start the payment activity via an explicit Intent
146
147 Intent intent = new Intent(MainActivity.this, PaymentActivity.class);
148 startActivity(intent);
149 } // end onClick handler
150 }
151
152 // set the btnPaymentListener for the btnPayment object
153 btnPayment.setOnClickListener(btnPaymentListener);
154 } // end onCreate method
155
156 // method displays persistent number of years if present
157 private void showCurrentYears()
158 {
159     final Spinner yearsSpinner = (Spinner)findViewById(R.id.yearsSpinner);
160
161     numberOfYears = sharedPref.getInt(YEARS_KEY, DEFAULT_YEARS);
162
163     if (numberOfYears > DEFAULT_YEARS) // if the number of years had been previously stored:
164     {
165         // convert number of years to (zero-based) yearsSpinner position (index)
166         int yearsIndex = numberOfYears - NUMBER_OF_TERMS;
167
168         // set the yearsSpinner selection based on yearsIndex
169         yearsSpinner.setSelection(yearsIndex);
170     }
171 } // end showCurrentYears method
172
173 // method displays persistent loan amount if present
174 private void showCurrentLoan()
175 {
176     final EditText txtLoan = (EditText)findViewById(R.id.txtLoan);
177
178     loanAmount = sharedPref.getFloat(LOAN_KEY, DEFAULT_LOAN);
179
180     if (loanAmount > DEFAULT_LOAN) // if the loan amount had been previously stored:
181     {
182         txtLoan.setText(Float.toString(loanAmount));
183     }
184 }
```

MainActivity > onCreate()

Switch to the PaymentActivity's Java code

Logcat TODO Terminal Build

Source generation ended in 1 s 109 ms (today 3:43 PM) 153:59 CRLF UTF-8 4 spaces Event Log

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

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ElectricCarFinancing app src main java edu udayton electriccarfinancing PaymentActivity

1:Project

Resource Manager

1:Project

Android

1:Project

app

manifests

java

edu.udayton.electriccarfinancing

MainActivity

PaymentActivity

edu.udayton.electriccarfinancing (androidTest)

edu.udayton.electriccarfinancing (test)

generatedJava

res

drawable

layout

mipmap

values

colors.xml

dimens.xml

strings.xml

styles.xml

Gradle Scripts

Layout Captures

2:Structure

Build Variants

2:Favorites

activity_main.xml activity_payment.xml PaymentActivity.java MainActivity.java

```
1 package edu.udayton.electriccarfinancing;
2
3 import ...
4
5 public class PaymentActivity extends AppCompatActivity {
6
7     @Override
8     protected void onCreate(Bundle savedInstanceState) {
9         super.onCreate(savedInstanceState);
10        setContentView(R.layout.activity_payment);
11    } // end onCreate method
12 } // end PaymentActivity class
```

Add line comments as closing tags for the onCreate method and the Payment class

Logcat TODO Terminal Build

Source generation ended in 1 s 109 ms (today 3:43 PM) 13:31 CRLF UTF-8 4 spaces

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src main java edu udayton electriccarfinancing PaymentActivity

1:Project

Resource Manager

Gradle

Android

1:Project

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 - MainActivity
 - PaymentActivity
 - edu.udayton.electriccarfinancing (androidTest)
 - edu.udayton.electriccarfinancing (test)
- generatedJava
- res
 - drawable
 - layout
 - mipmap
 - values
 - colors.xml
 - dimens.xml
 - strings.xml
 - styles.xml

Gradle Scripts

Layout Captures

Z: Structure

Favorites

Build Variants

PaymentActivity

```
1 package edu.udayton.electriccarfinancing;
2
3 import ...
4
5 public class PaymentActivity extends AppCompatActivity {
6
7     @Override
8     protected void onCreate(Bundle savedInstanceState) {
9         super.onCreate(savedInstanceState);
10        setContentView(R.layout.activity_payment);
11    } // end onCreate method
12 } // end PaymentActivity class
```

Add the data field to reference the SharedPreferences file
Type 'private Shared' here ...

Logcat TODO Terminal Build

Source generation ended in 1 s 109 ms (today 3:43 PM) 8:5 CRLF UTF-8 4 spaces

Event Log

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src main java edu udayton electriccarfinancing PaymentActivity

1:Project

Resource Manager

Gradle

1:Project

app

- manifests
- java
 - edu.udayton.electriccarfinancing
 - MainActivity
 - PaymentActivity
- edu.udayton.electriccarfinancing (androidTest)
- edu.udayton.electriccarfinancing (test)

generatedJava

res

- drawable
- layout
- mipmap
- values
 - colors.xml
 - dimens.xml
 - strings.xml
 - styles.xml

Gradle Scripts

Layout Captures

Structure

Favorites

Build Variants

PaymentActivity

```
1 package edu.udayton.electriccarfinancing;
2
3 import ...
4
5 public class PaymentActivity extends AppCompatActivity {
6     private Shared...
7         SharedPreferences (android.content)
8         SharedMemory (android.os)
9         SharedElementCallback (android.app)
10        SharedLibraryInfo (android.content.pm)
11        SharedPreferencesBackupHelper (android.app.b...
12    }
13
14 } // en...
15
16 }
```

... and select this android.content.SharedPreferences interface from the code completion menu

Logcat TODO Terminal Build

Source generation ended in 1 s 109 ms (today 3:43 PM) 8:19 CRLF UTF-8 4 spaces

Event Log

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing > app > src > main > java > edu > udayton > electriccarfinancing > PaymentActivity

1:Project Resource Manager

activity_main.xml activity_payment.xml PaymentActivity.java MainActivity.java

Android

app manifests java edu.udayton.electriccarfinancing MainActivity PaymentActivity edu.udayton.electriccarfinancing (androidTest) edu.udayton.electriccarfinancing (test) generatedJava res drawable layout mipmap values colors.xml dimens.xml strings.xml styles.xml

Gradle Scripts

Layout Captures

2: Favorites

Build Variants

PaymentActivity

```
1 package edu.udayton.electriccarfinancing;
2
3 import ...
4
5 public class PaymentActivity extends AppCompatActivity {
6
7     private SharedPreferences sharedPref; // Line 7, cursor here
8
9     @Override
10    protected void onCreate(Bundle savedInstanceState) {
11        super.onCreate(savedInstanceState);
12        setContentView(R.layout.activity_payment);
13    } // end onCreate method
14
15 } // end PaymentActivity class
16
17
```

Complete the sharedPref declaration statement

Logcat TODO Terminal Build

Source generation ended in 1 s 109 ms (today 3:43 PM)

11:5 CRLF UTF-8 4 spaces

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing > app > src > main > java > edu > udayton > electriccarfinancing > PaymentActivity

1:Project Resource Manager

Android

1:Project

app

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 - MainActivity
 - PaymentActivity
 - edu.udayton.electriccarfinancing (androidTest)
 - edu.udayton.electriccarfinancing (test)
- generatedJava
- res
 - drawable
 - layout
 - mipmap
 - values
 - colors.xml
 - dimens.xml
 - strings.xml
 - styles.xml

Gradle Scripts

Layout Captures

2:Structure

Build Variants

2:Favorites

PaymentActivity

```
1 package edu.udayton.electriccarfinancing;
2
3 import ...
4
5 public class PaymentActivity extends AppCompatActivity {
6
7     private SharedPreferences sharedPref;
8
9     @Override
10    protected void onCreate(Bundle savedInstanceState) {
11        super.onCreate(savedInstanceState);
12        setContentView(R.layout.activity_payment);
13    } // end onCreate method
14 } // end PaymentActivity class
```

Add the object to format the monthly payment for output
Type 'private final DecimalFormat' here ...

Logcat TODO Terminal Build

Source generation ended in 1 s 109 ms (today 3:43 PM) 11:5 CRLF UTF-8 4 spaces

Event Log

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing > app > src > main > java > edu > udayton > electriccarfinancing > PaymentActivity

1:Project Resource Manager

activity_main.xml activity_payment.xml PaymentActivity.java MainActivity.java

Android

app manifests java edu.udayton.electriccarfinancing MainActivity PaymentActivity edu.udayton.electriccarfinancing (androidTest) edu.udayton.electriccarfinancing (test) generatedJava res drawable layout mipmap values colors.xml dimens.xml strings.xml styles.xml Gradle Scripts

PaymentActivity.java

```
1 package edu.udayton.electriccarfinancing;
2
3 import ...
4
5 public class PaymentActivity extends AppCompatActivity {
6
7     private SharedPreferences sharedPref;
8
9     private final DecimalFormat decimalFormat;
10
11    @Override
12    protected void onCreate(Bundle savedInstanceState) {
13        super.onCreate(savedInstanceState);
14        setContentView(R.layout.activity_payment);
15
16        decimalFormat = new DecimalFormat("###,###,###.##");
17
18    }
19}
```

... and select this java.text.DecimalFormat class from the code completion menu

Logcat TODO Terminal Build

Source generation ended in 1 s 109 ms (today 3:43 PM)

11:22 CRLF UTF-8 4 spaces

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing > app > src > main > java > edu > udayton > electriccarfinancing > PaymentActivity

1:Project Resource Manager

activity_main.xml activity_payment.xml PaymentActivity.java MainActivity.java

Android

app manifests java

edu.udayton.electriccarfinancing

- MainActivity
- PaymentActivity

edu.udayton.electriccarfinancing (androidTest)

edu.udayton.electriccarfinancing (test)

generatedJava

res

- drawable
- layout
- mipmap
- values

 - colors.xml
 - dimens.xml
 - strings.xml
 - styles.xml

Gradle Scripts

Layout Captures

Z: Structure

Build Variants

2: Favorites

PaymentActivity

```
1 package edu.udayton.electriccarfinancing;
2
3 import ...
4
5 public class PaymentActivity extends AppCompatActivity {
6
7     private SharedPreferences sharedPref;
8
9     private final DecimalFormat currency = new DecimalFormat("###,###.##");
10
11     @Override
12     protected void onCreate(Bundle savedInstanceState) {
13         super.onCreate(savedInstanceState);
14         setContentView(R.layout.activity_payment);
15     } // end onCreate method
16 } // end PaymentActivity class
```

Complete the currency declaration/initialization statement

Logcat TODO Terminal Build

Source generation ended in 1 s 109 ms (today 3:43 PM) 13:77 CRLF UTF-8 4 spaces

Event Log

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing > app > src > main > java > edu > udayton > electriccarfinancing > PaymentActivity

1:Project Resource Manager

activity_main.xml activity_payment.xml PaymentActivity.java MainActivity.java

Android

app manifests java

edu.udayton.electriccarfinancing

- MainActivity
- PaymentActivity

edu.udayton.electriccarfinancing (androidTest)

edu.udayton.electriccarfinancing (test)

generatedJava

res

- drawable
- layout
- mipmap
- values

- colors.xml
- dimens.xml
- strings.xml
- styles.xml

Gradle Scripts

Layout Captures

Structure

Favorites

Build Variants

PaymentActivity

```
1 package edu.udayton.electriccarfinancing;
2
3 import ...
4
5 public class PaymentActivity extends AppCompatActivity {
6
7     private SharedPreferences sharedPref;
8
9     private final DecimalFormat currency = new DecimalFormat("###,###.##");
10
11     private static final int MONTHS_PER_YEAR = 12;
12     private static final String MONTHLY_PAYMENT_PREFIX = "Monthly Payment: ";
13
14     @Override
15     protected void onCreate(Bundle savedInstanceState) {
16         super.onCreate(savedInstanceState);
17         setContentView(R.layout.activity_payment);
18     } // end onCreate method
19 } // end PaymentActivity class
```

Add named constants for calculating and displaying the monthly payment

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src main java edu udayton electriccarfinancing PaymentActivity

1:Project Resource Manager Layout Captures 2:Structure Favorites Build Variants Device File Explorer

Android

1 Project

app manifests java

edu.udayton.electriccarfinancing

- MainActivity
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edu.udayton.electriccarfinancing (androidTest)

edu.udayton.electriccarfinancing (test)

generatedJava

res

- drawable
- layout
- mipmap
- values

 - colors.xml
 - dimens.xml
 - strings.xml
 - styles.xml

Gradle Scripts

activity_main.xml activity_payment.xml PaymentActivity.java MainActivity.java

```
1 package edu.udayton.electriccarfinancing;
2
3 import ...
4
5 public class PaymentActivity extends AppCompatActivity {
6
7     private SharedPreferences sharedPref;
8
9     private final DecimalFormat currency = new DecimalFormat("###,###.##");
10
11     private static final int MONTHS_PER_YEAR = 12;
12     private static final String MONTHLY_PAYMENT_PREFIX = "Monthly Payment: ";
13
14     @Override
15     protected void onCreate(Bundle savedInstanceState) {
16         super.onCreate(savedInstanceState);
17         setContentView(R.layout.activity_payment);
18
19         // create the SharedPreferences object for this activity
20
21         } // end onCreate method
22     } // end PaymentActivity class
23
24
25
26
27
28 }
```

In the onCreate method, add code to get the app's default SharedPreferences object and set sharedPref to reference it.

Type 'sharedPref = Pref' here ...

PaymentActivity > onCreate()

Logcat TODO Terminal Build

Source generation ended in 1 s 109 ms (today 3:43 PM)

25:9 CRLF UTF-8 4 spaces

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src main java edu udayton electriccarfinancing PaymentActivity

1:Project Resource Manager Layout Captures Favorites Build Variants

Android

app manifests java edu.udayton.electriccarfinancing MainActivity PaymentActivity

edu.udayton.electriccarfinancing (androidTest) edu.udayton.electriccarfinancing (test)

generatedJava res drawable layout mipmap values colors.xml dimens.xml strings.xml styles.xml

Gradle Scripts

PaymentActivity.java MainActivity.java

```
1 package edu.udayton.electriccarfinancing;
2
3 import ...
4
5 public class PaymentActivity extends AppCompatActivity {
6
7     private SharedPreferences sharedPref;
8
9     private final DecimalFormat currency = new DecimalFormat("###,###.##");
10
11    private static final int MONTHS_PER_YEAR = 12;
12    private static final String MONTHLY_PAYMENT_PREFIX = "Monthly Payment: ";
13
14    @Override
15    protected void onCreate(Bundle savedInstanceState) {
16        super.onCreate(savedInstanceState);
17        setContentView(R.layout.activity_payment);
18
19        // create the SharedPreferences object for this activity
20
21        sharedPref = PreferenceManager.getDefaultSharedPreferences(this);
22
23        // ...
24
25        SharedPreferencesCompat.setSharedPreferencesOnContext(sharedPref, this);
26    } // end onCreate()
27 } // end PaymentActivity
```

... and select this android.preference.PreferenceManager class from the code completion menu

Logcat TODO Terminal Build Event Log

' expected. Expression expected.

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src main java edu udayton electriccarfinancing PaymentActivity

1:Project Resource Manager Layout Captures 2:Structure Favorites Build Variants Device File Explorer

```
1 package edu.udayton.electriccarfinancing;
2
3 import ...
4
5 public class PaymentActivity extends AppCompatActivity {
6
7     private SharedPreferences sharedPref;
8
9     private final DecimalFormat currency = new DecimalFormat("###,###.##");
10
11    private static final int MONTHS_PER_YEAR = 12;
12    private static final String MONTHLY_PAYMENT_PREFIX = "Monthly Payment: ";
13
14    @Override
15    protected void onCreate(Bundle savedInstanceState) {
16        super.onCreate(savedInstanceState);
17        setContentView(R.layout.activity_payment);
18
19        // create the SharedPreferences object for this activity
20        sharedPref = PreferenceManager[Type a period(.) here ...]
21    } // end onCreate method
22 } // end PaymentActivity class
```

PaymentActivity > onCreate()

Logcat TODO Terminal Build Event Log

Expression expected; '}' expected. 26:39 CRLF UTF-8 4 spaces

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src main java edu udayton electriccarfinancing PaymentActivity

1:Project Resource Manager

1:Gradle

Java Android

activity_main.xml activity_payment.xml PaymentActivity.java MainActivity.java

app manifests java edu udayton electriccarfinancing PaymentActivity

MainActivity PaymentActivity

edu.udayton.electriccarfinancing (androidTest) edu.udayton.electriccarfinancing (test)

generatedJava res drawable layout mipmap values colors.xml dimens.xml strings.xml styles.xml

Gradle Scripts Layout Captures

2:Structure Favorites Build Variants

PaymentActivity > onCreate()

```
1 package edu.udayton.electriccarfinancing;
2
3 import ...
4
5 public class PaymentActivity extends AppCompatActivity {
6
7     private SharedPreferences sharedPref;
8
9     private final DecimalFormat currency = new DecimalFormat("$###,###.##");
10
11    private static final int MONTHS_PER_YEAR = 12;
12    private static final String MONTHLY_PAYMENT_PREFIX = "Monthly Payment: ";
13
14    @Override
15    protected void onCreate(Bundle savedInstanceState) {
16        super.onCreate(savedInstanceState);
17        setContentView(R.layout.activity_payment);
18
19        // create the SharedPreferences object for this activity
20
21        sharedPref = PreferenceManager...
22    } // end onCreate method
23
24 } // end PaymentActivity class
```

... and select this getDefaultSharedPreferences method from the code completion menu

getDefaultSharedPreferences (Context context)
getDefaultSharedPreferencesName (Context context)
setDefaultValues (Context context, int resId, boolean r)
setDefaultValues (Context context, String sharedPrefe...
KEY_HAS_SET_DEFAULT_VALUES (= "_has_set_default_value")
METADATA_KEY_PREFERENCES (= "android.preference")
OnActivityDestroyListener (android.preference.PreferenceManager...)
OnActivityResultListener (android.preference.PreferenceManager)
OnActivityStopListener (android.preference.PreferenceManager)
par

Logcat TODO Terminal Build Event Log

Expression expected; ' expected. 26:40 CRLF UTF-8 4 spaces

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing > app > src > main > java > edu > udayton > electriccarfinancing > PaymentActivity

1:Project Resource Manager Layout Captures 2:Structure Favorites Build Variants Device File Explorer

Android

1 Project

app

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 - MainActivity
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 - edu.udayton.electriccarfinancing (androidTest)
 - edu.udayton.electriccarfinancing (test)
- generatedJava
- res
 - drawable
 - layout
 - mipmap
 - values
 - colors.xml
 - dimens.xml
 - strings.xml
 - styles.xml

Gradle Scripts

activity_main.xml activity_payment.xml PaymentActivity.java MainActivity.java

```
1 package edu.udayton.electriccarfinancing;
2
3 import ...
4
5 public class PaymentActivity extends AppCompatActivity {
6
7     private SharedPreferences sharedPref;
8
9     private final DecimalFormat currency = new DecimalFormat("###,###.##");
10
11    private static final int MONTHS_PER_YEAR = 12;
12    private static final String MONTHLY_PAYMENT_PREFIX = "Monthly Payment: ";
13
14    @Override
15    protected void onCreate(Bundle savedInstanceState) {
16        super.onCreate(savedInstanceState);
17        setContentView(R.layout.activity_payment);
18
19        // create the SharedPreferences object for this activity
20
21        sharedPref = PreferenceManager.getDefaultSharedPreferences(this); [ ] ← Complete this assignment statement for the sharedPref variable
22    } // end onCreate method
23
24 } // end PaymentActivity class
```

PaymentActivity > onCreate()

Logcat TODO Terminal Build

Source generation ended in 1 s 109 ms (today 3:43 PM) 26:74 CRLF UTF-8 4 spaces

Event Log

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing > app > src > main > java > edu > udayton > electriccarfinancing > PaymentActivity

1:Project Resource Manager Layout Captures 2:Structure Favorites Build Variants Device File Explorer

Android

1 Project

app

- manifests
- java
 - edu.udayton.electriccarfinancing
 - MainActivity
 - PaymentActivity
 - edu.udayton.electriccarfinancing (androidTest)
 - edu.udayton.electriccarfinancing (test)
- generatedJava
- res
 - drawable
 - layout
 - mipmap
 - values
 - colors.xml
 - dimens.xml
 - strings.xml
 - styles.xml

Gradle Scripts

activity_main.xml activity_payment.xml PaymentActivity.java MainActivity.java

```
1 package edu.udayton.electriccarfinancing;
2
3 import ...
4
5 public class PaymentActivity extends AppCompatActivity {
6
7     private SharedPreferences sharedPref;
8
9     private final DecimalFormat currency = new DecimalFormat("###,###.##");
10
11    private static final int MONTHS_PER_YEAR = 12;
12    private static final String MONTHLY_PAYMENT_PREFIX = "Monthly Payment: ";
13
14    @Override
15    protected void onCreate(Bundle savedInstanceState) {
16        super.onCreate(savedInstanceState);
17        setContentView(R.layout.activity_payment);
18
19        // create the SharedPreferences object for this activity
20
21        sharedPref = PreferenceManager.getDefaultSharedPreferences(this);
22
23        // get UI component references
24
25        // end onCreate method
26    } // end PaymentActivity class
27
28
29
30
31
32
33 }
```

Add onCreate code to get references to the output TextView and ImageView
Type 'final TextView' here ...

PaymentActivity > onCreate()

Logcat TODO Terminal Build

Source generation ended in 1 s 109 ms (today 3:43 PM) 30:9 CRLF UTF-8 4 spaces

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src main java edu udayton electriccarfinancing PaymentActivity

1:Project Resource Manager Layout Captures Z:Structure Favorites Build Variants Device File Explorer

Android

1:Project

app

- manifests
- java
 - edu.udayton.electriccarfinancing
 - MainActivity
 - PaymentActivity
 - edu.udayton.electriccarfinancing (androidTest)
 - edu.udayton.electriccarfinancing (test)
- generatedJava
- res
 - drawable
 - layout
 - mipmap
 - values
 - colors.xml
 - dimens.xml
 - strings.xml
 - styles.xml

Gradle Scripts

activity_main.xml activity_payment.xml PaymentActivity.java MainActivity.java

```
1 package edu.udayton.electriccarfinancing;
2
3 import ...
4
5 public class PaymentActivity extends AppCompatActivity {
6
7     private SharedPreferences sharedPref;
8
9     private final DecimalFormat currency = new DecimalFormat("###,###.##");
10
11     private static final int MONTHS_PER_YEAR = 12;
12     private static final String MONTHLY_PAYMENT_PREFIX = "Monthly Payment: ";
13
14     @Override
15     protected void onCreate(Bundle savedInstanceState) {
16         super.onCreate(savedInstanceState);
17         setContentView(R.layout.activity_payment);
18
19         // create the SharedPreferences object for this activity
20
21         sharedPref = PreferenceManager.getDefaultSharedPreferences(this);
22
23         // get UI component references
24
25         final TextView ...
26     } // end ...
27 }
```

... and select this android.widget.TextView class from the code completion menu

Logcat TODO Terminal Build

Source generation ended in 1 s 109 ms (today 3:43 PM) 30:20 CRLF UTF-8 4 spaces Event Log

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing > app > src > main > java > edu > udayton > electriccarfinancing > PaymentActivity

1:Project Resource Manager Layout Captures Favorites Build Variants Device File Explorer

Android

1 Project

app

- manifests
- java
 - edu.udayton.electriccarfinancing
 - MainActivity
 - PaymentActivity
 - edu.udayton.electriccarfinancing (androidTest)
 - edu.udayton.electriccarfinancing (test)
- generatedJava
- res
 - drawable
 - layout
 - mipmap
 - values
 - colors.xml
 - dimens.xml
 - strings.xml
 - styles.xml

Gradle Scripts

activity_main.xml activity_payment.xml PaymentActivity.java MainActivity.java

```
1 package edu.udayton.electriccarfinancing;
2
3 import ...
4
5 public class PaymentActivity extends AppCompatActivity {
6
7     private SharedPreferences sharedPref;
8
9     private final DecimalFormat currency = new DecimalFormat("###,###.##");
10
11    private static final int MONTHS_PER_YEAR = 12;
12    private static final String MONTHLY_PAYMENT_PREFIX = "Monthly Payment: ";
13
14    @Override
15    protected void onCreate(Bundle savedInstanceState) {
16        super.onCreate(savedInstanceState);
17        setContentView(R.layout.activity_payment);
18
19        // create the SharedPreferences object for this activity
20
21        sharedPref = PreferenceManager.getDefaultSharedPreferences(this);
22
23        // get UI component references
24
25        final TextView txtMonthlyPayment = (TextView) findViewById(R.id.txtMonthlyPayment); [ ] Complete the txtMonthlyPayment variable's declaration/initialization statement
26
27    } // end onCreate method
28
29} // end PaymentActivity class
```

PaymentActivity > onCreate()

Logcat TODO Terminal Build

Source generation ended in 1 s 109 ms (today 3:43 PM) 31:91 CRLF UTF-8 4 spaces

Event Log

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src main java edu udayton electriccarfinancing PaymentActivity

1:Project

Resource Manager

Gradle

activity_main.xml activity_payment.xml PaymentActivity.java MainActivity.java

app manifests java edu.udayton.electriccarfinancing MainActivity PaymentActivity

edu.udayton.electriccarfinancing (androidTest) edu.udayton.electriccarfinancing (test)

generatedJava res drawable layout mipmap values

colors.xml dimens.xml strings.xml styles.xml

Gradle Scripts

Layout Captures

Structure

Favorites

Build Variants

PaymentActivity.java

```
1 package edu.udayton.electriccarfinancing;
2
3 import ...
4
5 public class PaymentActivity extends AppCompatActivity {
6
7     private SharedPreferences sharedPref;
8
9     private final DecimalFormat currency = new DecimalFormat("###,###.##");
10
11    private static final int MONTHS_PER_YEAR = 12;
12    private static final String MONTHLY_PAYMENT_PREFIX = "Monthly Payment: ";
13
14    @Override
15    protected void onCreate(Bundle savedInstanceState) {
16        super.onCreate(savedInstanceState);
17        setContentView(R.layout.activity_payment);
18
19        // create the SharedPreferences object for this activity
20
21        sharedPref = PreferenceManager.getDefaultSharedPreferences(this);
22
23        // get UI component references
24
25        final TextView txtMonthlyPayment = (TextView) findViewById(R.id.txtMonthlyPayment);
26
27    } // end onCreate method
28
29 } // end PaymentActivity class
```

On the next line, type 'final ImageView' here ...

PaymentActivity > onCreate()

Logcat TODO Terminal Build

Event Log

Source generation ended in 1 s 109 ms (today 3:43 PM) 32:9 CRLF UTF-8 4 spaces

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing > app > src > main > java > edu > udayton > electriccarfinancing > PaymentActivity

1:Project Resource Manager Layout Captures Favorites Build Variants

activity_main.xml activity_payment.xml PaymentActivity.java MainActivity.java

Android

app

- manifests
- java
 - edu.udayton.electriccarfinancing
 - MainActivity
 - PaymentActivity
 - edu.udayton.electriccarfinancing (androidTest)
 - edu.udayton.electriccarfinancing (test)
- generatedJava
- res
 - drawable
 - layout
 - mipmap
 - values
 - colors.xml
 - dimens.xml
 - strings.xml
 - styles.xml

Gradle Scripts

PaymentActivity.java

```
1 package edu.udayton.electriccarfinancing;
2
3 import ...
4
5 public class PaymentActivity extends AppCompatActivity {
6
7     private SharedPreferences sharedPref;
8
9     private final DecimalFormat currency = new DecimalFormat("###,###.##");
10
11    private static final int MONTHS_PER_YEAR = 12;
12    private static final String MONTHLY_PAYMENT_PREFIX = "Monthly Payment: ";
13
14    @Override
15    protected void onCreate(Bundle savedInstanceState) {
16        super.onCreate(savedInstanceState);
17        setContentView(R.layout.activity_payment);
18
19        // create the SharedPreferences object for this activity
20
21        sharedPref = PreferenceManager.getDefaultSharedPreferences(this);
22
23        // get UI component references
24
25
26        final TextView txtMonthlyPayment = (TextView) findViewById(R.id.txtMonthlyPayment);
27
28        final ImageView imageView;
29
30        } // end
31    } // end
32
33
34
35 }
```

... and select this ImageView class from the code completion menu

PaymentActivity > onCreate()

Logcat TODO Terminal Build

Source generation ended in 1 s 109 ms (today 3:43 PM) 32:21 CRLF UTF-8 4 spaces

Event Log

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing > app > src > main > java > edu > udayton > electriccarfinancing > PaymentActivity

1:Project Resource Manager Layout Captures Favorites Build Variants

activity_main.xml activity_payment.xml PaymentActivity.java MainActivity.java

Android

app manifests java edu.udayton.electriccarfinancing MainActivity PaymentActivity edu.udayton.electriccarfinancing (androidTest) edu.udayton.electriccarfinancing (test) generatedJava res drawable layout mipmap values colors.xml dimens.xml strings.xml styles.xml

Gradle Scripts

Layout Captures

2:Structure

Complete the imgYears variable's declaration/initialization statement

```
1 package edu.udayton.electriccarfinancing;
2
3 import ...
4
5 public class PaymentActivity extends AppCompatActivity {
6
7     private SharedPreferences sharedPref;
8
9     private final DecimalFormat currency = new DecimalFormat("###,###.##");
10
11    private static final int MONTHS_PER_YEAR = 12;
12    private static final String MONTHLY_PAYMENT_PREFIX = "Monthly Payment: ";
13
14    @Override
15    protected void onCreate(Bundle savedInstanceState) {
16        super.onCreate(savedInstanceState);
17        setContentView(R.layout.activity_payment);
18
19        // create the SharedPreferences object for this activity
20
21        sharedPref = PreferenceManager.getDefaultSharedPreferences(this);
22
23        // get UI component references
24
25        final TextView txtMonthlyPayment = (TextView) findViewById(R.id.txtMonthlyPayment);
26        final ImageView imgYears = (ImageView) findViewById(R.id.imgYears); I
27    } // end onCreate method
28} // end PaymentActivity class
```

PaymentActivity > onCreate()

Logcat TODO Terminal Build

Event Log

Source generation ended in 1 s 109 ms (today 3:43 PM)

33:75 CRLF UTF-8 4 spaces

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing > app > src > main > java > edu > udayton > electriccarfinancing > PaymentActivity

1:Project Resource Manager Layout Captures 2:Structure Favorites Build Variants Device File Explorer

Android

1 Project

app

- manifests
- java
 - edu.udayton.electriccarfinancing
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 - edu.udayton.electriccarfinancing (androidTest)
 - edu.udayton.electriccarfinancing (test)
- generatedJava
- res
 - drawable
 - layout
 - mipmap
 - values
 - colors.xml
 - dimens.xml
 - strings.xml
 - styles.xml

Gradle Scripts

activity_main.xml activity_payment.xml PaymentActivity.java MainActivity.java

```
1 package edu.udayton.electriccarfinancing;
2
3 import ...
4
5 public class PaymentActivity extends AppCompatActivity {
6
7     private SharedPreferences sharedPref;
8
9     private final DecimalFormat currency = new DecimalFormat("###,###.##");
10
11    private static final int MONTHS_PER_YEAR = 12;
12    private static final String MONTHLY_PAYMENT_PREFIX = "Monthly Payment: ";
13
14    @Override
15    protected void onCreate(Bundle savedInstanceState) {
16        super.onCreate(savedInstanceState);
17        setContentView(R.layout.activity_payment);
18
19        // create the SharedPreferences object for this activity
20
21        sharedPref = PreferenceManager.getDefaultSharedPreferences(this);
22
23        // get UI component references
24
25        final TextView txtMonthlyPayment = (TextView) findViewById(R.id.txtMonthlyPayment);
26        final ImageView imgYears = (ImageView) findViewById(R.id.imgYears);
27
28        // retrieve the persistent data from the SharedPreferences object
29        int numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
30        float loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
31        float interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);
32
33    } // end onCreate method
34
35} // end PaymentActivity class
```

PaymentActivity > onCreate()

Add onCreate code to get the persistent data from the SharedPreferences file

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing > app > src > main > java > edu > udayton > electriccarfinancing > PaymentActivity

1:Project Resource Manager Layout Captures 2:Structure Favorites Build Variants Device File Explorer

Android

1:Project

app

- manifests
- java
 - edu.udayton.electriccarfinancing
 - MainActivity
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 - edu.udayton.electriccarfinancing (androidTest)
 - edu.udayton.electriccarfinancing (test)
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 - mipmap
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 - colors.xml
 - dimens.xml
 - strings.xml
 - styles.xml

Gradle Scripts

activity_main.xml activity_payment.xml PaymentActivity.java MainActivity.java

```
1 package edu.udayton.electriccarfinancing;
2
3 import ...
4
5 public class PaymentActivity extends AppCompatActivity {
6
7     private SharedPreferences sharedPref;
8
9     private final DecimalFormat currency = new DecimalFormat("$###,###.##");
10
11    private static final int MONTHS_PER_YEAR = 12;
12    private static final String MONTHLY_PAYMENT_PREFIX = "Monthly Payment: ";
13
14    @Override
15    protected void onCreate(Bundle savedInstanceState) {
16        super.onCreate(savedInstanceState);
17        setContentView(R.layout.activity_payment);
18
19        // create the SharedPreferences object for this activity
20
21        sharedPref = PreferenceManager.getDefaultSharedPreferences(this);
22
23        // get UI component references
24
25        final TextView txtMonthlyPayment = (TextView) findViewById(R.id.txtMonthlyPayment);
26        final ImageView imgYears = (ImageView) findViewById(R.id.imgYears);
27
28        // retrieve the persistent data from the SharedPreferences object
29        int numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
30        float loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
31        float interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);
32
33        float monthlyPaymentAmount = 0; // output variable[ Add this variable for the output (monthly payment) value
34
35        } // end onCreate method
36    } // end PaymentActivity class
```

PaymentActivity > onCreate()

Logcat TODO Terminal Build

Source generation ended in 1 s 109 ms (today 3:43 PM) 40:59 CRLF UTF-8 4 spaces

Event Log

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing > app > src > main > java > edu > udayton > electriccarfinancing > PaymentActivity

1:Project Resource Manager Layout Captures 2:Structure Favorites Build Variants Device File Explorer

```
1 package edu.udayton.electriccarfinancing;
2
3 import ...
4
5 public class PaymentActivity extends AppCompatActivity {
6
7     private SharedPreferences sharedPref;
8
9     private final DecimalFormat currency = new DecimalFormat("$###,###.##");
10
11    private static final int MONTHS_PER_YEAR = 12;
12    private static final String MONTHLY_PAYMENT_PREFIX = "Monthly Payment: ";
13
14    @Override
15    protected void onCreate(Bundle savedInstanceState) {
16        super.onCreate(savedInstanceState);
17        setContentView(R.layout.activity_payment);
18
19        // create the SharedPreferences object for this activity
20
21        sharedPref = PreferenceManager.getDefaultSharedPreferences(this);
22
23        // get UI component references
24
25        final TextView txtMonthlyPayment = (TextView) findViewById(R.id.txtMonthlyPayment);
26        final ImageView imgYears = (ImageView) findViewById(R.id.imgYears);
27
28        // retrieve the persistent data from the SharedPreferences object
29        int numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
30        float loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
31        float interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);
32
33        float monthlyPaymentAmount = 0; // output variable
34
35        // only continue if all persistent data was retrieved
36        if (numberOfYears > MainActivity.DEFAULT_YEARS &&
37            loanAmount > MainActivity.DEFAULT_LOAN &&
38            interestRate > MainActivity.DEFAULT_RATE)
39        {
40            [
41        }
42    } // end onCreate method
43 } // end PaymentActivity class
```

PaymentActivity > onCreate()

Only go on if we got valid data from the SharedPreferences file

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing > app > src > main > java > edu > udayton > electriccarfinancing > PaymentActivity

1:Project Resource Manager Layout Captures 2:Structure Favorites Build Variants Device File Explorer

```
private static final String MONTHLY_PAYMENT_PREFIX = "Monthly Payment: ";

@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_payment);

    // create the SharedPreferences object for this activity
    sharedPref = PreferenceManager.getDefaultSharedPreferences(this);

    // get UI component references
    final TextView txtMonthlyPayment = (TextView) findViewById(R.id.txtMonthlyPayment);
    final ImageView imgYears = (ImageView) findViewById(R.id.imgYears);

    // retrieve the persistent data from the SharedPreferences object
    int numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
    float loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
    float interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

    float monthlyPaymentAmount = 0; // output variable

    // only continue if all persistent data was retrieved
    if (numberOfYears > MainActivity.DEFAULT_YEARS &&
        loanAmount > MainActivity.DEFAULT_LOAN &&
        interestRate > MainActivity.DEFAULT_RATE)
    {
        // calculate and display the monthly payment amount in the txtMonthlyPayment TextView
        monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberOfYears))) /
            (MONTHS_PER_YEAR * numberOfYears);
        String outputString = MONTHLY_PAYMENT_PREFIX + currency.format(monthlyPaymentAmount);
        txtMonthlyPayment.setText(outputString);
    }
} // end onCreate method
} // end PaymentActivity class
```

PaymentActivity > onCreate()

Calculate and output the monthly payment for the loan

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing > app > src > main > java > edu > udayton > electriccarfinancing > PaymentActivity

1:Project Resource Manager Layout Captures 2:Structure Favorites Build Variants Device File Explorer

Android

app

- manifests
- java
 - edu.udayton.electriccarfinancing
 - MainActivity
 - PaymentActivity
 - edu.udayton.electriccarfinancing (androidTest)
 - edu.udayton.electriccarfinancing (test)
- generatedJava
- res
 - drawable
 - layout
 - mipmap
 - values
 - colors.xml
 - dimens.xml
 - strings.xml
 - styles.xml

Gradle Scripts

activity_main.xml activity_payment.xml PaymentActivity.java MainActivity.java

```
private static final int MONTHS_PER_YEAR = 12;
private static final String MONTHLY_PAYMENT_PREFIX = "Monthly Payment: ";

@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_payment);

    // create the SharedPreferences object for this activity
    sharedPref = PreferenceManager.getDefaultSharedPreferences(this);

    // get UI component references

    final TextView txtMonthlyPayment = (TextView) findViewById(R.id.txtMonthlyPayment);
    final ImageView imgYears = (ImageView) findViewById(R.id.imgYears);

    // retrieve the persistent data from the SharedPreferences object
    int numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
    float loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
    float interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

    float monthlyPaymentAmount = 0; // output variable

    // only continue if all persistent data was retrieved
    if (numberOfYears > MainActivity.DEFAULT_YEARS &&
        loanAmount > MainActivity.DEFAULT_LOAN &&
        interestRate > MainActivity.DEFAULT_RATE)
    {
        // calculate and display the monthly payment amount in the txtMonthlyPayment TextView

        monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberOfYears))) /
            (MONTHS_PER_YEAR * numberOfYears);
        String outputString = MONTHLY_PAYMENT_PREFIX + currency.format(monthlyPaymentAmount);
        txtMonthlyPayment.setText(outputString);

        // display the appropriate number of years image in the imgYears ImageView
    }
} // end onCreate method
} // end PaymentActivity class
```

Using a switch ...

PaymentActivity > onCreate()

Logcat TODO Terminal Build

Source generation ended in 1 s 109 ms (today 3:43 PM) 56:13 CRLF UTF-8 4 spaces

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing > app > src > main > java > edu > udayton > electriccarfinancing > PaymentActivity

1:Project Resource Manager 2:Layout Captures 3:Z-Structure 4:Favorites 5:Build Variants 6:Device File Explorer

Android

app

- manifests
- java
 - edu.udayton.electriccarfinancing
 - MainActivity
 - PaymentActivity
 - edu.udayton.electriccarfinancing (androidTest)
 - edu.udayton.electriccarfinancing (test)
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 - colors.xml
 - dimens.xml
 - strings.xml
 - styles.xml

Gradle Scripts

activity_main.xml activity_payment.xml PaymentActivity.java MainActivity.java

```
int numberofYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
float loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
float interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

float monthlyPaymentAmount = 0; // output variable

// only continue if all persistent data was retrieved
if (numberofYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)

{
    // calculate and display the monthly payment amount in the txtMonthlyPayment TextView

    monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberofYears))) /
        (MONTHS_PER_YEAR * numberofYears);
    String outputString = MONTHLY_PAYMENT_PREFIX + currency.format(monthlyPaymentAmount);
    txtMonthlyPayment.setText(outputString);

    // display the appropriate number of years image in the imgYears ImageView

    switch (numberofYears)
    {
        case 3:
            imgYears.setImageResource(R.drawable.three);
            break;
        case 4:
            imgYears.setImageResource(R.drawable.four);
            break;
        case 5:
            imgYears.setImageResource(R.drawable.five);
            break;
        default:
            // incredibly unlikely chance that the number of years is invalid
            Toast toast = Toast.makeText(PaymentActivity.this,
                "Invalid number of years (weird!!!): " + numberofYears,
                Toast.LENGTH_LONG);
            toast.show();
            break;
    } // end switch
} // end onCreate method
} // end PaymentActivity class
```

PaymentActivity > onCreate()

... display the number of years as an image in the imgYears ImageView

Use the switch's default case to display the incredibly unlikely error message via a Toast message

Logcat TODO Terminal Build

Source generation ended in 1 s 109 ms (today 3:43 PM) 75:28 CRLF UTF-8 4 spaces

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

Build the project

Make Project (Ctrl+F9)

activity_main.xml activity_payment.xml PaymentActivity.java MainActivity.java

```
int numberofYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
float loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
float interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

float monthlyPaymentAmount = 0; // output variable

// only continue if all persistent data was retrieved
if (numberofYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)
{
    // calculate and display the monthly payment amount in the txtMonthlyPayment TextView

    monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberofYears))) /
        (MONTHS_PER_YEAR * numberofYears);
    String outputString = MONTHLY_PAYMENT_PREFIX + currency.format(monthlyPaymentAmount);
    txtMonthlyPayment.setText(outputString);

    // display the appropriate number of years image in the imgYears ImageView

    switch (numberofYears)
    {
        case 3:
            imgYears.setImageResource(R.drawable.three);
            break;
        case 4:
            imgYears.setImageResource(R.drawable.four);
            break;
        case 5:
            imgYears.setImageResource(R.drawable.five);
            break;
        default:
            // incredibly unlikely chance that the number of years is invalid
            Toast toast = Toast.makeText(PaymentActivity.this,
                "Invalid number of years (weird!!!): " + numberofYears,
                Toast.LENGTH_LONG);
            toast.show();
            break;
    } // end switch
}
} // end onCreate method
} // end PaymentActivity class
```

PaymentActivity > onCreate()

Logcat TODO Terminal Build

Source generation ended in 1 s 109 ms (today 3:43 PM) 75:28 CRLF UTF-8 4 spaces

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

Open the AVD Manager

AVD Manager

ElectricCarFinancing > app > src > main > java > edu > udayton > electriccarfinancing > PaymentActivity

1:Project

Resource Manager

Gradle

activity_main.xml activity_payment.xml PaymentActivity.java MainActivity.java

```
int numberofYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
float loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
float interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

float monthlyPaymentAmount = 0; // output variable

// only continue if all persistent data was retrieved
if (numberofYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)
{
    // calculate and display the monthly payment amount in the txtMonthlyPayment TextView

    monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberofYears))) /
        (MONTHS_PER_YEAR * numberofYears);
    String outputString = MONTHLY_PAYMENT_PREFIX + currency.format(monthlyPaymentAmount);
    txtMonthlyPayment.setText(outputString);

    // display the appropriate number of years image in the imgYears ImageView

    switch (numberofYears)
    {
        case 3:
            imgYears.setImageResource(R.drawable.three);
            break;
        case 4:
            imgYears.setImageResource(R.drawable.four);
            break;
        case 5:
            imgYears.setImageResource(R.drawable.five);
            break;
        default:
            // incredibly unlikely chance that the number of years is invalid
            Toast toast = Toast.makeText(PaymentActivity.this,
                "Invalid number of years (weird!!!): " + numberofYears,
                Toast.LENGTH_LONG);
            toast.show();
            break;
    } // end switch
}
} // end onCreate method
} // end PaymentActivity class
```

PaymentActivity > onCreate()

Logcat TODO Terminal Build

Gradle build finished in 11 s 888 ms (moments ago)

75:28 CRLF UTF-8 4 spaces

Event Log

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...app\src\main\java\edu\udayton\electriccarfinancing\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

Android Virtual Device Manager

Your Virtual Devices

Android Studio

Resource Manager

Gradle

Layout Captures

Favorites

Build Variants

Device File Explorer

Logcat TODO Terminal Build

PaymentActivity > onCreate()

Gradle build finished in 11 s 888 ms (moments ago)

75:28 CRLF UTF-8 4 spaces

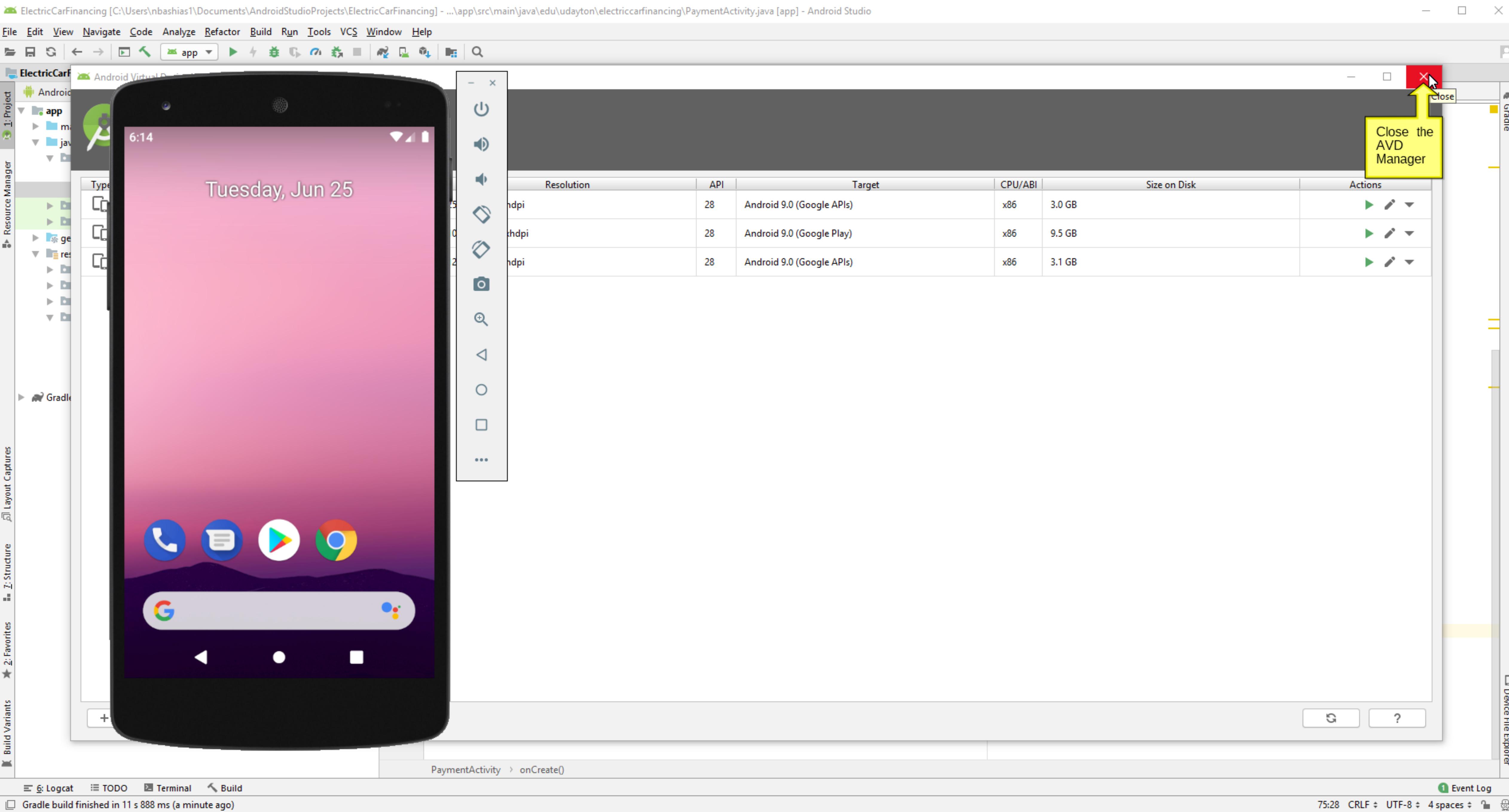
Table Data:

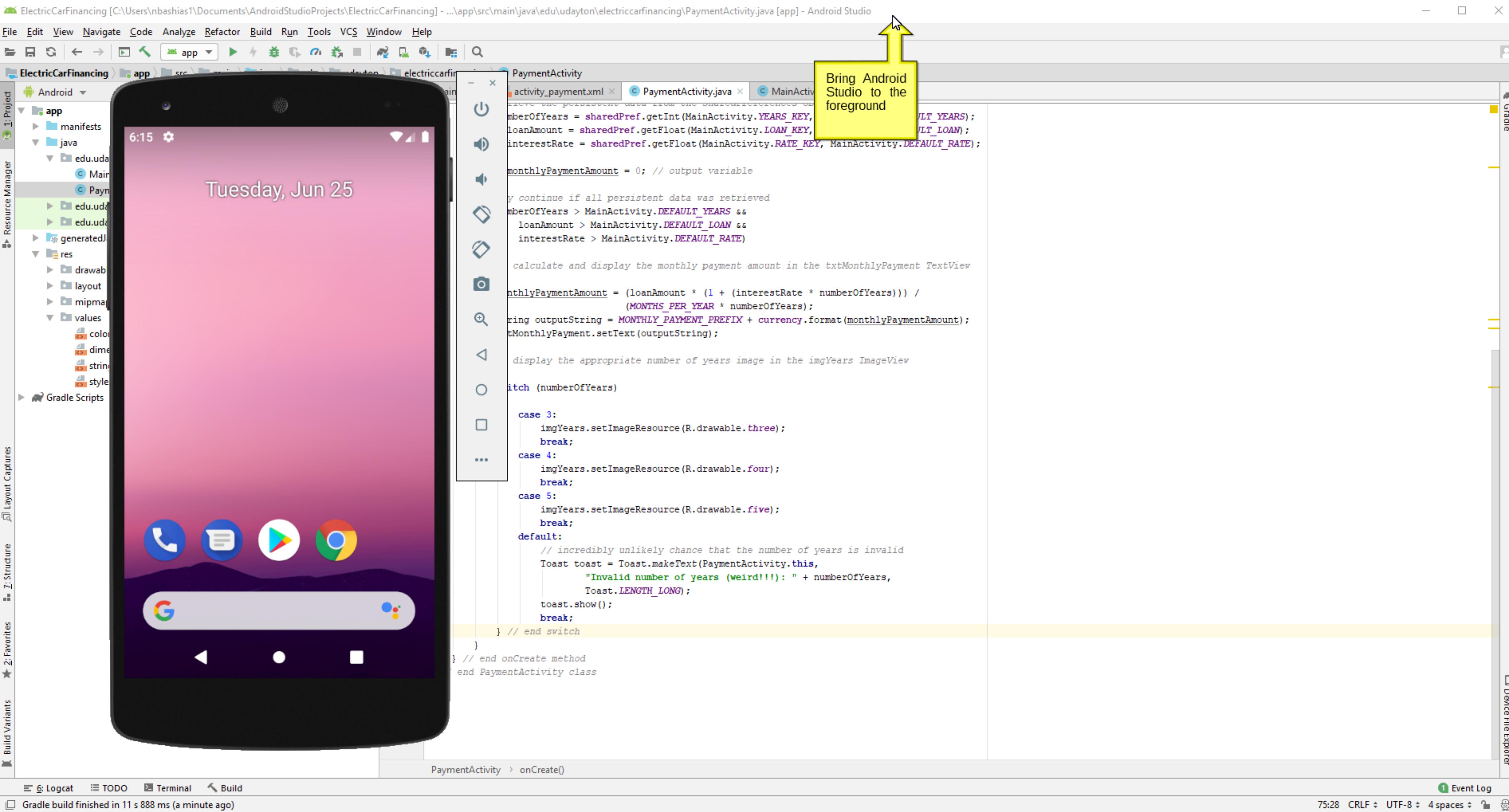
Type	Name	Play Store	Resolution	API	Target	CPU/ABI	Size on Disk	Actions
AVD	Nexus 10 Pie		2560 x 1600: xhdpi	28	Android 9.0 (Google APIs)	x86	3.0 GB	Launch this AVD in the emulator
AVD	Nexus 5 Pie		1080 x 1920: xxhdpi	28	Android 9.0 (Google Play)	x86	9.5 GB	Launch this AVD in the emulator
AVD	Nexus 7 Pie		1200 x 1920: xhdpi	28	Android 9.0 (Google APIs)	x86	3.1 GB	Launch this AVD in the emulator

+ Create Virtual Device... ?

A yellow callout box points to the "Launch this AVD in the emulator" button for the Nexus 5 Pie device.

A yellow callout box contains the text: "Launch the emulator with the Nexus 5 system image".





ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

Run the app ...

Run 'app' (Shift+F10)

ElectricCarFinancing > app > Run 'app' (Shift+F10)

1:Project

Resource Manager

Gradle

activity_main.xml activity_payment.xml PaymentActivity.java MainActivity.java

app manifests java edu.udayton.electriccarfinancing MainActivity PaymentActivity edu.udayton.electriccarfinancing (androidTest) edu.udayton.electriccarfinancing (test) generatedJava res drawable layout mipmap values colors.xml dimens.xml strings.xml styles.xml

Gradle Scripts

Layout Captures

Z:Structure

Favorites

Build Variants

Device File Explorer

```
int numberofYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
float loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
float interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

float monthlyPaymentAmount = 0; // output variable

// only continue if all persistent data was retrieved
if (numberofYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)
{
    // calculate and display the monthly payment amount in the txtMonthlyPayment TextView

    monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberofYears))) /
        (MONTHS_PER_YEAR * numberofYears);
    String outputString = MONTHLY_PAYMENT_PREFIX + currency.format(monthlyPaymentAmount);
    txtMonthlyPayment.setText(outputString);

    // display the appropriate number of years image in the imgYears ImageView

    switch (numberofYears)
    {
        case 3:
            imgYears.setImageResource(R.drawable.three);
            break;
        case 4:
            imgYears.setImageResource(R.drawable.four);
            break;
        case 5:
            imgYears.setImageResource(R.drawable.five);
            break;
        default:
            // incredibly unlikely chance that the number of years is invalid
            Toast toast = Toast.makeText(PaymentActivity.this,
                "Invalid number of years (weird!!!): " + numberofYears,
                Toast.LENGTH_LONG);
            toast.show();
            break;
    } // end switch
}
} // end onCreate method
} // end PaymentActivity class
```

PaymentActivity > onCreate()

Logcat TODO Terminal Build

Run selected configuration

75:28 CRLF UTF-8 4 spaces

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing > app > src > main > java > edu > udayton > electriccarfinancing > PaymentActivity

1:Project Resource Manager

Android

app

- manifests
- java
 - edu.udayton.electriccarfinancing
 - MainActivity
 - PaymentActivity
 - edu.udayton.electriccarfinancing (androidTest)
 - edu.udayton.electriccarfinancing (test)
- generatedJava
- res
 - drawable
 - layout
 - mipmap
 - values
 - colors.xml
 - dimens.xml
 - strings.xml
 - styles.xml

Gradle Scripts

Layout Captures

2:Structure

2:Favorites

Build Variants

activity_main.xml activity_payment.xml PaymentActivity.java MainActivity.java

```
int numberofYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
float loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
float interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

float monthlyPaymentAmount = 0; // output variable

// only continue if all persistent data was retrieved
if (numberofYears > 0 && loanAmount > 0 && interestRate > 0) {
    monthlyPaymentAmount = calculateMonthlyPayment(loanAmount, interestRate, numberofYears);
    toast.show();
    break;
} // end switch
} // end onCreate method
} // end PaymentActivity class
```

Select Deployment Target

Connected Devices

- Nexus 5 Pie (Android 9, API 28) ... in the running emulator

Available Virtual Devices

- Nexus 10 Pie
- Nexus 7 Pie

Create New Virtual Device

Use same selection for future launches

OK Cancel Help

Click OK to confirm

PaymentActivity > onCreate()

Logcat TODO Terminal Build

Run selected configuration

75:28 CRLF UTF-8 4 spaces

Event Log

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...app\src\main\java\edu\udayton\electriccarfinancing\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src \ java \ edu \ udayton \ electriccarfinancing \ PaymentActivity.java

1:Project Resource Manager Layout Captures Z:Structure Favorites Build Variants Device File Explorer

Electric Car Financing

Electric Car Financing

Three

Select the term of the loan

Car Loan Amount

Interest Rate

Car Payment

A hand holding a pen, drawing a car outline on a whiteboard.

6:15

PaymentActivity

activity_payment.xml PaymentActivity.java MainActivity.java

```
numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

monthlyPaymentAmount = 0; // output variable

// continue if all persistent data was retrieved
if (numberOfYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)

    calculate and display the monthly payment amount in the txtMonthlyPayment TextView
    monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberOfYears))) /
        (MONTHS_PER_YEAR * numberOfYears);
    String outputString = MONTHLY_PAYMENT_PREFIX + currency.format(monthlyPaymentAmount);
    txtMonthlyPayment.setText(outputString);

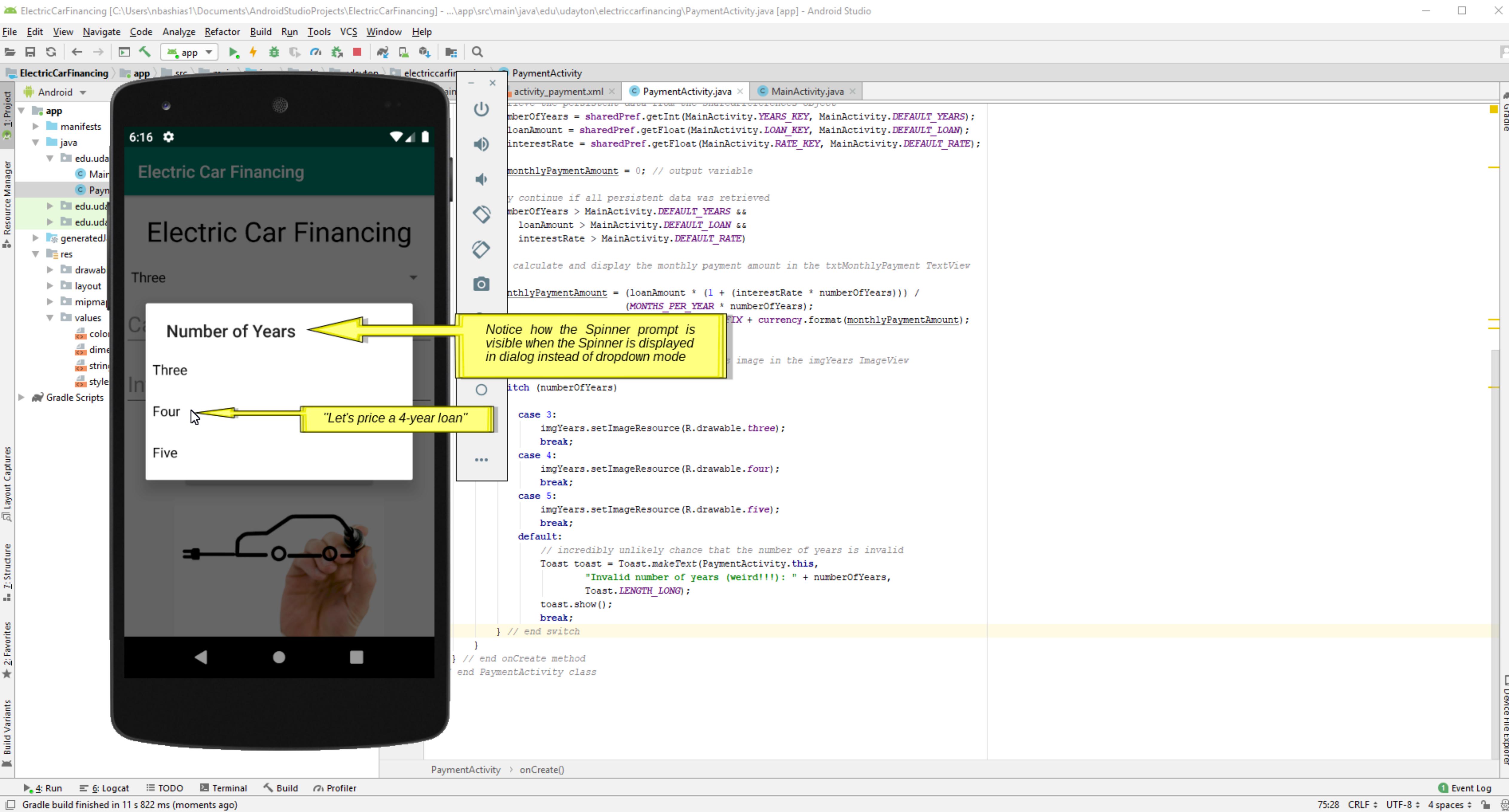
    display the appropriate number of years image in the imgYears ImageView
    switch (numberOfYears)

        case 3:
            imgYears.setImageResource(R.drawable.three);
            break;
        case 4:
            imgYears.setImageResource(R.drawable.four);
            break;
        case 5:
            imgYears.setImageResource(R.drawable.five);
            break;
        default:
            // incredibly unlikely chance that the number of years is invalid
            Toast toast = Toast.makeText(PaymentActivity.this,
                "Invalid number of years (weird!!!): " + numberOfYears,
                Toast.LENGTH_LONG);
            toast.show();
            break;
    } // end switch
} // end onCreate method
end PaymentActivity class
```

PaymentActivity > onCreate()

Run Logcat TODO Terminal Build Profiler Event Log

Gradle build finished in 11 s 822 ms (moments ago) 75:28 CRLF UTF-8 4 spaces



ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...app\src\main\java\edu\udayton\electriccarfinancing\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src \MainActivity.java \PaymentActivity.java \PaymentActivity.xml

1-Project Resource Manager

Android app manifests java edu.udayton MainActivity.java PaymentActivity.java

activity_payment.xml PaymentActivity.java MainActivity.java

```
PaymentActivity
activity_payment.xml x PaymentActivity.java x MainActivity.java x
numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

monthlyPaymentAmount = 0; // output variable

// continue if all persistent data was retrieved
if (numberOfYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)

    calculate and display the monthly payment amount in the txtMonthlyPayment TextView
    monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberOfYears))) /
        (MONTHS_PER_YEAR * numberOfYears);
    outputString = MONTHLY_PAYMENT_PREFIX + currency.format(monthlyPaymentAmount);
    txtPayment.setText(outputString);

    display the appropriate number of years image in the imgYears ImageView
    switch (numberOfYears)
        case 1:
            imgYears.setImageResource(R.drawable.one);
            break;
        case 2:
            imgYears.setImageResource(R.drawable.two);
            break;
        case 3:
            imgYears.setImageResource(R.drawable.three);
            break;
        case 4:
            imgYears.setImageResource(R.drawable.four);
            break;
        case 5:
            imgYears.setImageResource(R.drawable.five);
            break;
        default:
            // incredibly unlikely chance that the number of years is invalid
            Toast toast = Toast.makeText(PaymentActivity.this,
                "Invalid number of years (weird!!!): " + numberOfYears,
                Toast.LENGTH_LONG);
            toast.show();
            break;
    } // end switch
} // end onCreate method
end PaymentActivity class
```

6:16 Electric Car Financing

Electric Car Financing

Four

35600.00

"The car costs \$35,600.00"

Interest Rate

Car Payment

1 2 3 -

4 5 6 [

7 8 9]

, 0 .

Device File Explorer

Layout Captures

Z-Structure

Favorites

Build Variants

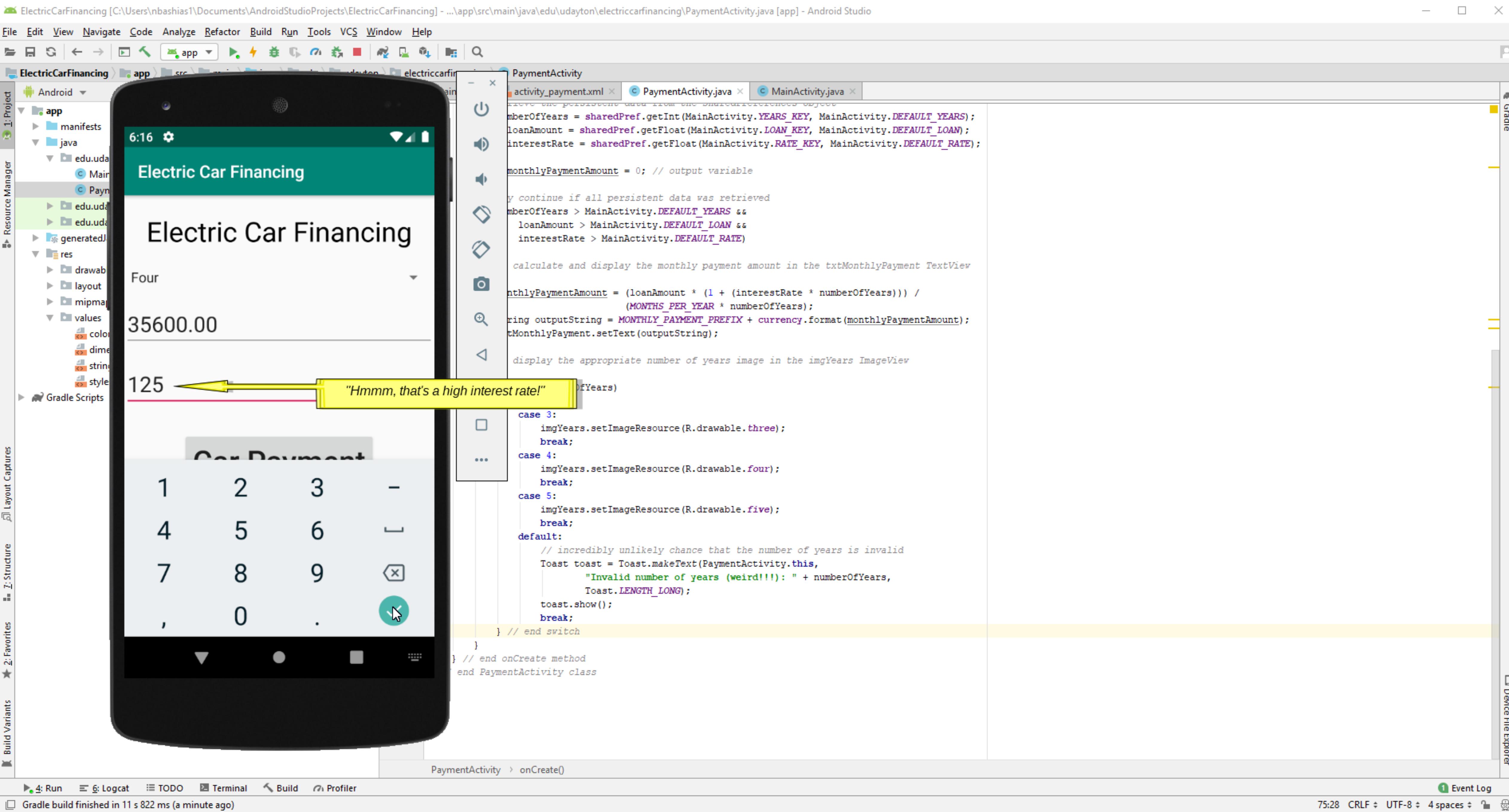
PaymentActivity > onCreate()

Run Logcat TODO Terminal Build Profiler

Gradle build finished in 11 s 822 ms (a minute ago)

75:28 CRLF UTF-8 4 spaces

Event Log



ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...app\src\main\java\edu\udayton\electriccarfinancing\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src MainActivity.java PaymentActivity.java

1:Project

Resource Manager

Gradle Scripts

Layout Captures

2:Structure

Favorites

Build Variants

Device File Explorer

4: Run 6: Logcat 8: TODO 10: Terminal 12: Build 14: Profiler 1 Event Log

Gradle build finished in 11 s 822 ms (a minute ago) 75:28 CRLF UTF-8 4 spaces

PaymentActivity

activity_payment.xml PaymentActivity.java MainActivity.java

```
numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

monthlyPaymentAmount = 0; // output variable

// continue if all persistent data was retrieved
if (numberOfYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)

    calculate and display the monthly payment amount in the txtMonthlyPayment TextView
    monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberOfYears))) /
        (MONTHS_PER_YEAR * numberOfYears);
    String outputString = MONTHLY_PAYMENT_PREFIX + currency.format(monthlyPaymentAmount);
    txtMonthlyPayment.setText(outputString);

    display the appropriate number of years image in the imgYears ImageView
    switch (numberOfYears)
        case 3:
            imgYears.setImageResource(R.drawable.three);
            break;
        case 4:
            imgYears.setImageResource(R.drawable.four);
            break;
        case 5:
            imgYears.setImageResource(R.drawable.five);
            break;
        default:
            // incredibly unlikely chance that the number of years is invalid
            Toast toast = Toast.makeText(PaymentActivity.this,
                "Invalid number of years (weird!!!): " + numberOfYears,
                Toast.LENGTH_LONG);
            toast.show();
            break;
    } // end switch
} // end onCreate method
end PaymentActivity class
```

Electric Car Financing

Electric Car Financing

Four

35600.00

125

Car Payment

"OK, show me my monthly payment"

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...app\src\main\java\edu\udayton\electriccarfinancing\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src \MainActivity.java \PaymentActivity.java \PaymentActivity.xml

1-Project Resource Manager

Android app manifests java edu.udayton MainActivity.java PaymentActivity.java res drawables layout mipmap values colors dimensions strings styles

generatedJars Gradle Scripts

Layout Captures Z-Structure Favorites 2: Favorites Build Variants Device File Explorer

PaymentActivity

activity_payment.xml PaymentActivity.java MainActivity.java

```
numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

monthlyPaymentAmount = 0; // output variable

// continue if all persistent data was retrieved
if (numberOfYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)

    calculate and display the monthly payment amount in the txtMonthlyPayment TextView
    monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberOfYears))) /
        (MONTHS_PER_YEAR * numberOfYears);
    String outputString = MONTHLY_PAYMENT_PREFIX + currency.format(monthlyPaymentAmount);
    txtMonthlyPayment.setText(outputString);

    display the appropriate number of years image in the imgYears ImageView
    switch (numberOfYears)
        case 3:
            imgYears.setImageResource(R.drawable.three);
            break;
        case 4:
            imgYears.setImageResource(R.drawable.four);
            break;
        case 5:
            imgYears.setImageResource(R.drawable.five);
            break;
        default:
            // incredibly unlikely chance that the number of years is invalid
            Toast toast = Toast.makeText(PaymentActivity.this,
                "Invalid number of years (weird!!!): " + numberOfYears,
                Toast.LENGTH_SHORT).show();
    }
} // end onCreate method
end PaymentActivity class
```

6:17 Electric Car Financing

Electric Car Financing

Four

35600.00

125

Car Payment

invalid interest rate: 125

"Huh, must have dropped a decimal point somewhere..."

Run Logcat TODO Terminal Build Profiler

Gradle build finished in 11 s 822 ms (a minute ago) 75:28 CRLF UTF-8 4 spaces

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...app\src\main\java\edu\udayton\electriccarfinancing\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src Main electriccarfinancing PaymentActivity.java

1-Project

Resource Manager

Electric Car Financing

Electric Car Financing

Four

35600.00

125

"Yeah, this is not right"

Car Payment

Device File Explorer

PaymentActivity

activity_payment.xml x PaymentActivity.java x MainActivity.java x

```
numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

monthlyPaymentAmount = 0; // output variable

// continue if all persistent data was retrieved
if (numberOfYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)

    calculate and display the monthly payment amount in the txtMonthlyPayment TextView
    monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberOfYears))) /
        (MONTHS_PER_YEAR * numberOfYears);
    String outputString = MONTHLY_PAYMENT_PREFIX + currency.format(monthlyPaymentAmount);
    txtMonthlyPayment.setText(outputString);

    display the appropriate number of years image in the imgYears ImageView
    switch (numberOfYears)
        case 3:
            imgYears.setImageResource(R.drawable.three);
            break;
        case 4:
            imgYears.setImageResource(R.drawable.four);
            break;
        case 5:
            imgYears.setImageResource(R.drawable.five);
            break;
        default:
            // incredibly unlikely chance that the number of years is invalid
            Toast toast = Toast.makeText(PaymentActivity.this,
                "Invalid number of years (weird!!!): " + numberOfYears,
                Toast.LENGTH_LONG);
            toast.show();
            break;
    } // end switch
} // end onCreate method
end PaymentActivity class
```

PaymentActivity > onCreate()

Run Logcat TODO Terminal Build Profiler Event Log

Gradle build finished in 11 s 822 ms (a minute ago) 75:28 CRLF UTF-8 4 spaces

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src Main electriccarfinancing PaymentActivity.java

1-Project

Android

app manifests java edu.udayton Main PaymentActivity.java

Resource Manager

1-Project

generatedJARs res drawables layout mipmap values

values colors dimensions strings styles

Gradle Scripts

Layout Captures

2-Structure

Build Variants

2-Favorites

Build Variant

Device File Explorer

PaymentActivity

activity_payment.xml PaymentActivity.java MainActivity.java

```
numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

monthlyPaymentAmount = 0; // output variable

// continue if all persistent data was retrieved
if (numberOfYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)

    calculate and display the monthly payment amount in the txtMonthlyPayment TextView
    monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberOfYears))) /
        (MONTHS_PER_YEAR * numberOfYears);
    String outputString = MONTHLY_PAYMENT_PREFIX + currency.format(monthlyPaymentAmount);
    txtMonthlyPayment.setText(outputString);

    display the appropriate number of years image in the imgYears ImageView
    switch (numberOfYears)
        case 3:
            imgYears.setImageResource(R.drawable.three);
            break;
        case 4:
            imgYears.setImageResource(R.drawable.four);
            break;
        case 5:
            imgYears.setImageResource(R.drawable.five);
            break;
        default:
            // incredibly unlikely chance that the number of years is invalid
            Toast toast = Toast.makeText(PaymentActivity.this,
                "Invalid number of years (weird!!!): " + numberOfYears,
                Toast.LENGTH_LONG);
            toast.show();
            break;
    } // end switch
} // end onCreate method
end PaymentActivity class
```

PaymentActivity > onCreate()

Run Logcat TODO Terminal Build Profiler

Gradle build finished in 11 s 822 ms (2 minutes ago)

75:28 CRLF UTF-8 4 spaces

Event Log

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...app\src\main\java\edu\udayton\electriccarfinancing\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src \MainActivity.java \PaymentActivity.java \PaymentActivity.xml

1:Project

Resource Manager

Gradle Scripts

Layout Captures

2:Structure

Favorites

Build Variants

Device File Explorer

4:Run 6:Logcat 8:TODO 10:Terminal 12:Build 14:Profiler 16:Event Log

Gradle build finished in 11 s 822 ms (2 minutes ago) 75:28 CRLF UTF-8 4 spaces

PaymentActivity

activity_payment.xml PaymentActivity.java MainActivity.java

```
numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

monthlyPaymentAmount = 0; // output variable

// continue if all persistent data was retrieved
if (numberOfYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)

    calculate and display the monthly payment amount in the txtMonthlyPayment TextView
    monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberOfYears))) /
        (MONTHS_PER_YEAR * numberOfYears);
    String outputString = MONTHLY_PAYMENT_PREFIX + currency.format(monthlyPaymentAmount);
    txtMonthlyPayment.setText(outputString);

    display the appropriate number of years image in the imgYears ImageView
    switch (numberOfYears)

        case 3:
            imgYears.setImageResource(R.drawable.three);
            break;
        case 4:
            imgYears.setImageResource(R.drawable.four);
            break;
        case 5:
            imgYears.setImageResource(R.drawable.five);
            break;
        default:
            // incredibly unlikely chance that the number of years is invalid
            Toast toast = Toast.makeText(PaymentActivity.this,
                "Invalid number of years (weird!!!): " + numberOfYears,
                Toast.LENGTH_LONG);
            toast.show();
            break;
    } // end switch
} // end onCreate method
end PaymentActivity class
```

Electric Car Financing

Electric Car Financing

Four

35600.00

4.15

Car Payment

"What's the monthly payment now?"

The screenshot shows the 'Electric Car Financing' application running on an Android device. The main screen displays the title 'Electric Car Financing' and a large text area showing '35600.00' followed by '4.15'. Below this, there is a button labeled 'Car Payment' with a hand-drawn car icon. A yellow callout bubble with the text 'What's the monthly payment now?' points to the 'Car Payment' button. The Android navigation bar at the bottom includes back, home, and recent apps buttons.

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src Main electriccarfinancing PaymentActivity.java

1-Project

Android

app

- manifests
- java
- edu.udayton
- MainActivity.java
- PaymentActivity.java
- edu.udayton
- edu.udayton

Resource Manager

generatedJARs

res

- drawables
- layout
- mipmap
- values
- colors
- dimens
- strings
- styles

Gradle Scripts

Layout Captures

2-Structure

Favorites

Build Variants

2-Favorites

Device File Explorer

PaymentActivity

activity_payment.xml x PaymentActivity.java x MainActivity.java x

```
numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

monthlyPaymentAmount = 0; // output variable

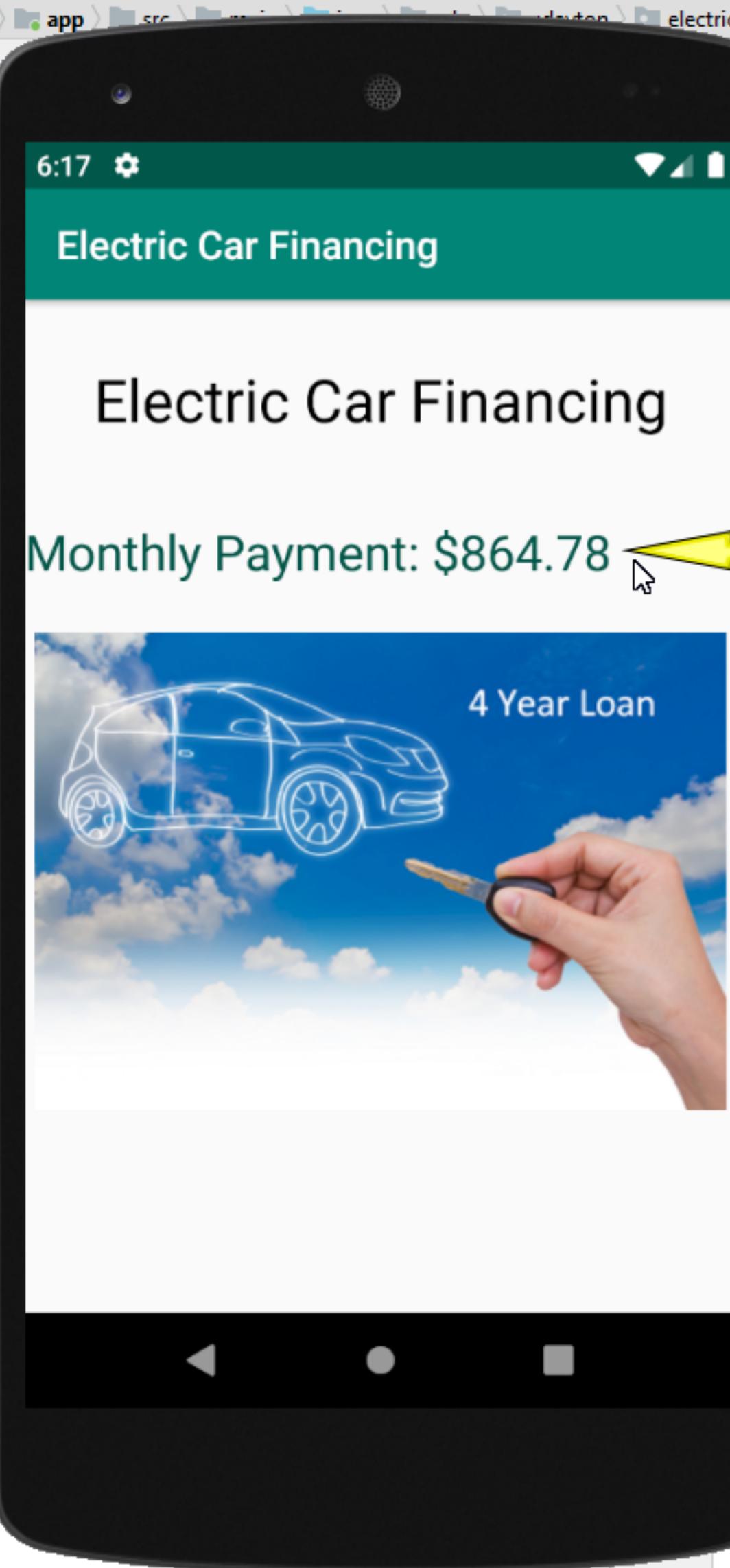
// continue if all persistent data was retrieved
if (numberOfYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)

    calculate and display the monthly payment amount in the txtMonthlyPayment TextView
    monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberOfYears))) /
        (numberOfYears);
    currency.format(monthlyPaymentAmount);

    display the appropriate number of years image in the imgYears ImageView
    switch (numberOfYears)
        case 3:
            imgYears.setImageResource(R.drawable.three);
            break;
        case 4:
            imgYears.setImageResource(R.drawable.four);
            break;
        case 5:
            imgYears.setImageResource(R.drawable.five);
            break;
        default:
            // incredibly unlikely chance that the number of years is invalid
            Toast toast = Toast.makeText(PaymentActivity.this,
                "Invalid number of years (weird!!!): " + numberOfYears,
                Toast.LENGTH_LONG);
            toast.show();
            break;
    } // end switch
} // end onCreate method
end PaymentActivity class
```

Monthly Payment: \$864.78

4 Year Loan



PaymentActivity > onCreate()

Run Logcat TODO Terminal Build Profiler Event Log

Gradle build finished in 11 s 822 ms (2 minutes ago) 75:28 CRLF UTF-8 4 spaces

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...app\src\main\java\edu\udayton\electriccarfinancing\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src \MainActivity.java \PaymentActivity.java \PaymentActivity.xml

1-Project Resource Manager

Android app manifests java edu.udayton MainActivity.java PaymentActivity.java res drawables layout mipmap values generated Gradle Scripts Layout Captures Z-Structure Favorites Build Variants Device File Explorer

Electric Car Financing

6:17

Electric Car Financing

Monthly Payment: \$864.78

4 Year Loan

Got a better deal, so I'll re-calculate

PaymentActivity

```
activity_payment.xml x PaymentActivity.java x MainActivity.java x
numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

monthlyPaymentAmount = 0; // output variable

// continue if all persistent data was retrieved
if (numberOfYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)

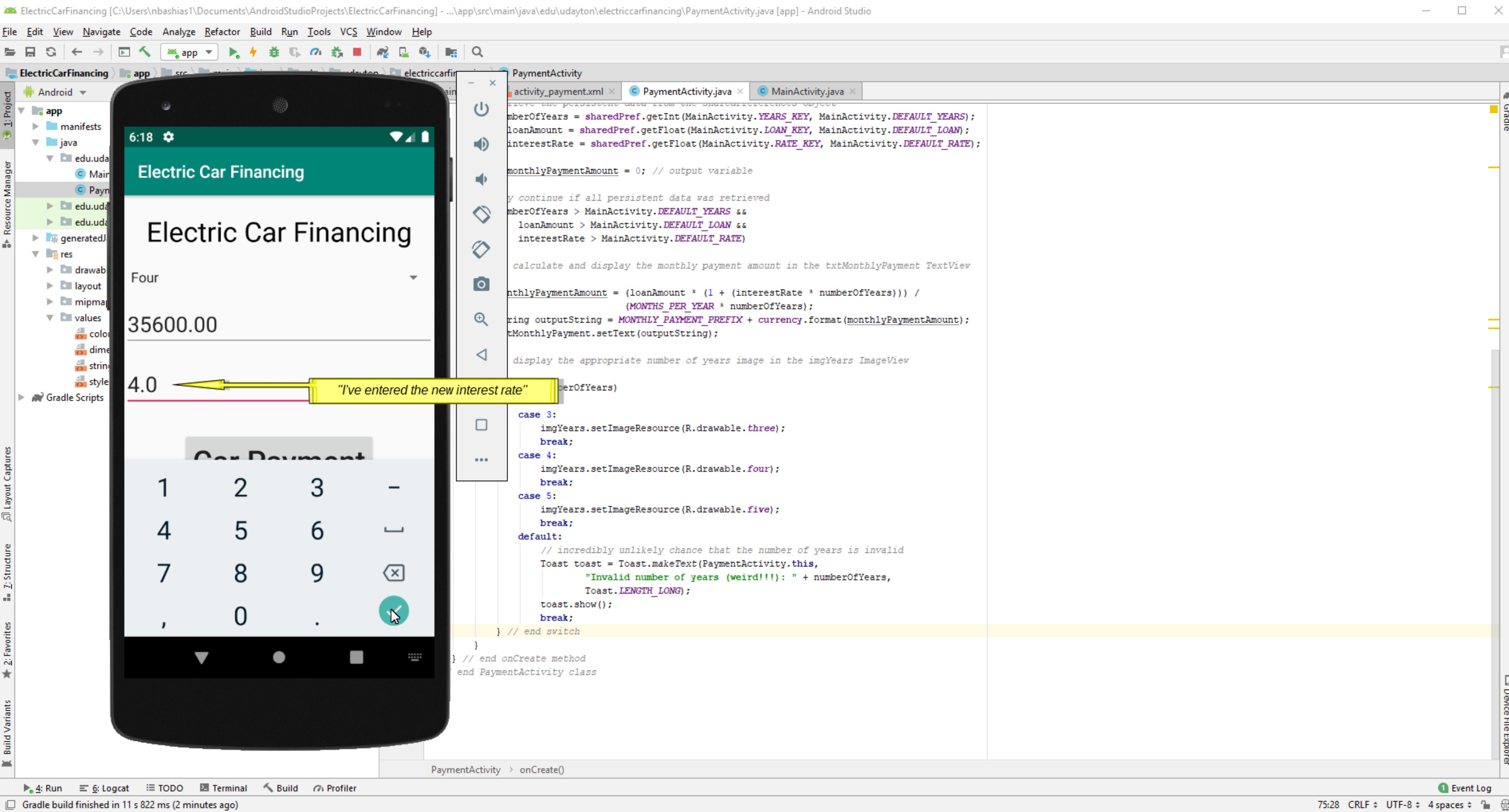
    calculate and display the monthly payment amount in the txtMonthlyPayment TextView
    monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberOfYears))) /
        (MONTHS_PER_YEAR * numberOfYears);
    String outputString = MONTHLY_PAYMENT_PREFIX + currency.format(monthlyPaymentAmount);
    txtMonthlyPayment.setText(outputString);

    display the appropriate number of years image in the imgYears ImageView
    switch (numberOfYears)
        case 3:
            imgYears.setImageResource(R.drawable.three);
            break;
        case 4:
            imgYears.setImageResource(R.drawable.four);
            break;
        case 5:
            imgYears.setImageResource(R.drawable.five);
            break;
        default:
            // incredibly unlikely chance that the number of years is invalid
            Toast toast = Toast.makeText(PaymentActivity.this,
                "Invalid number of years (weird!!!): " + numberOfYears,
                Toast.LENGTH_LONG);
            toast.show();
            break;
    } // end switch
} // end onCreate method
end PaymentActivity class
```

PaymentActivity > onCreate()

Run Logcat TODO Terminal Build Profiler Event Log

Gradle build finished in 11 s 822 ms (2 minutes ago) 75:28 CRLF UTF-8 4 spaces



ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src Main electriccarfinancing PaymentActivity.java

1:Project

Resource Manager

Electric Car Financing

Electric Car Financing

Four

35600.00

4.0

Car Payment

"Can't wait to see how much the monthly payment changes"

Device File Explorer

PaymentActivity

activity_payment.xml x PaymentActivity.java x MainActivity.java x

```
numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

monthlyPaymentAmount = 0; // output variable

// continue if all persistent data was retrieved
if (numberOfYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)

    calculate and display the monthly payment amount in the txtMonthlyPayment TextView
    monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberOfYears))) /
        (MONTHS_PER_YEAR * numberOfYears);
    String outputString = MONTHLY_PAYMENT_PREFIX + currency.format(monthlyPaymentAmount);
    txtMonthlyPayment.setText(outputString);

    display the appropriate number of years image in the imgYears ImageView
    switch (numberOfYears)
        case 3:
            imgYears.setImageResource(R.drawable.three);
            break;
        case 4:
            imgYears.setImageResource(R.drawable.four);
            break;
        case 5:
            imgYears.setImageResource(R.drawable.five);
            break;
        default:
            // incredibly unlikely chance that the number of years is invalid
            Toast toast = Toast.makeText(PaymentActivity.this,
                "Invalid number of years (weird!!!): " + numberOfYears,
                Toast.LENGTH_LONG);
            toast.show();
            break;
    } // end switch
} // end onCreate method
end PaymentActivity class
```

PaymentActivity > onCreate()

Run Logcat TODO Terminal Build Profiler Event Log

Gradle build finished in 11 s 822 ms (2 minutes ago) 75:28 CRLF UTF-8 4 spaces

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src java MainActivity.java PaymentActivity.java

1:Project

Resource Manager

Electric Car Financing

Monthly Payment: \$860.33

4 Year Loan

Electric Car Financing

6:18

PaymentActivity

activity_payment.xml PaymentActivity.java MainActivity.java

```
numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

monthlyPaymentAmount = 0; // output variable

// continue if all persistent data was retrieved
if (numberOfYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)

    calculate and display the monthly payment amount in the txtMonthlyPayment TextView
    monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberOfYears))) /
        (MONTHS_PER_YEAR * numberOfYears);
    = MONTHLY_PAYMENT_PREFIX + currency.format(monthlyPaymentAmount);
    setTxt(outputString);

    display the appropriate number of years image in the imgYears ImageView
    switch (numberOfYears)
        case 3:
            imgYears.setImageResource(R.drawable.three);
            break;
        case 4:
            imgYears.setImageResource(R.drawable.four);
            break;
        case 5:
            imgYears.setImageResource(R.drawable.five);
            break;
        default:
            // incredibly unlikely chance that the number of years is invalid
            Toast toast = Toast.makeText(PaymentActivity.this,
                "Invalid number of years (weird!!!): " + numberOfYears,
                Toast.LENGTH_LONG);
            toast.show();
            break;
    } // end switch
} // end onCreate method
end PaymentActivity class
```

"Not as much as I thought it would :("

Layout Captures

2: Favorites

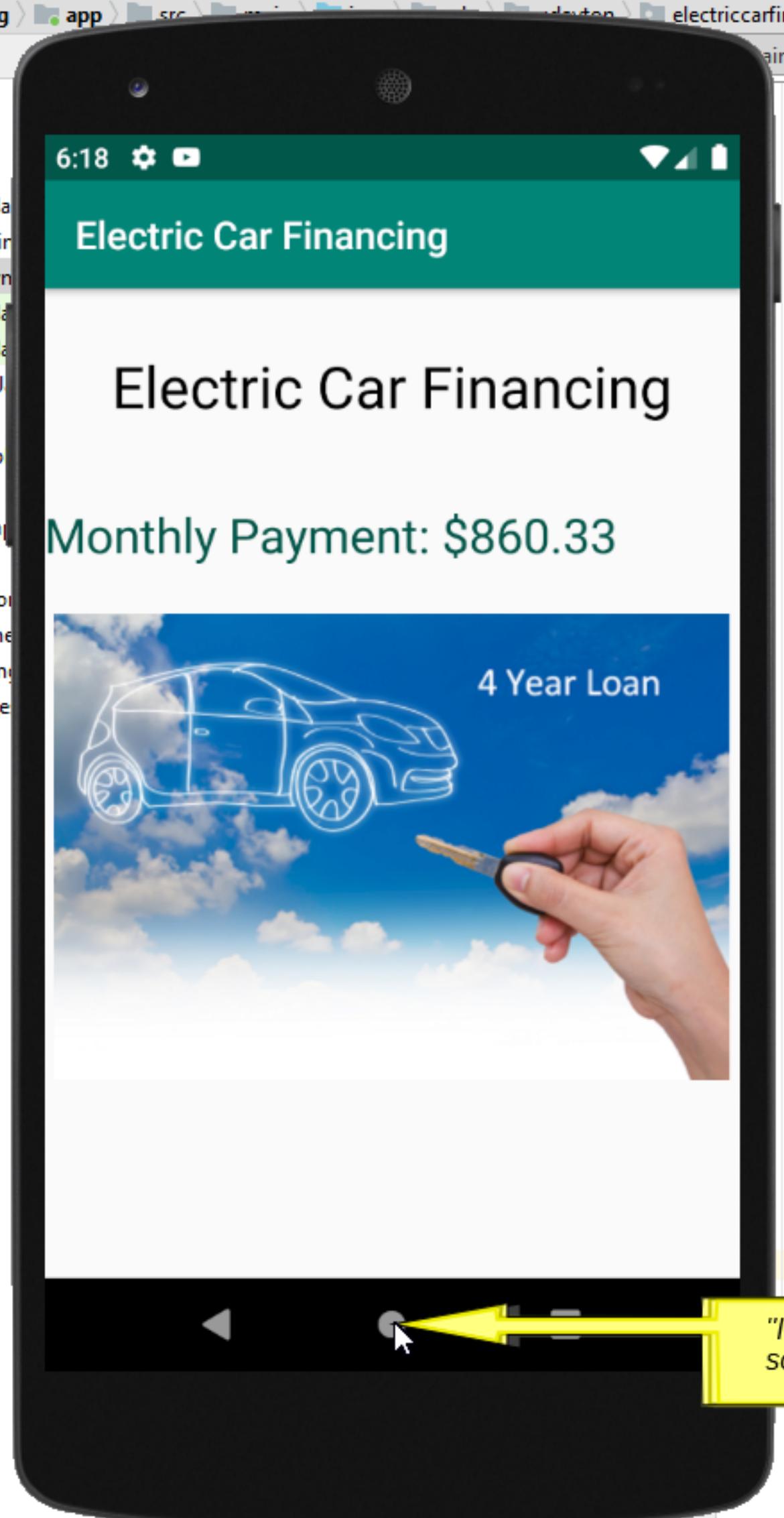
Build Variants

Device File Explorer

PaymentActivity > onCreate()

Run Logcat TODO Terminal Build Profiler Event Log

Gradle build finished in 11 s 822 ms (3 minutes ago) 75:28 CRLF UTF-8 4 spaces



```
PaymentActivity
activity_payment.xml × PaymentActivity.java × MainActivity.java ×
mberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

monthlyPaymentAmount = 0; // output variable

// continue if all persistent data was retrieved
mberOfYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)

// calculate and display the monthly payment amount in the txtMonthlyPayment TextView
monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberOfWorkers))) / 
    (MONTHS_PER_YEAR * numberOfWorkers);
String outputString = MONTHLY_PAYMENT_PREFIX + currency.format(monthlyPaymentAmount);
txtMonthlyPayment.setText(outputString);

// display the appropriate number of years image in the imgYears ImageView
switch (numberOfWorkers)
{
    case 3:
        imgYears.setImageResource(R.drawable.three);
        break;
    case 4:
        imgYears.setImageResource(R.drawable.four);
        break;
    case 5:
        imgYears.setImageResource(R.drawable.five);
        break;
    default:
        // incredibly unlikely chance that the number of years is invalid
        Toast toast = Toast.makeText(PaymentActivity.this,
            "Invalid number of years (weird!!!): " + numberOfWorkers,
            Toast.LENGTH_LONG);
        toast.show();
        break;
}
// end switch
```

"I'll have to look into other financial sources and try again tomorrow"

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src java MainActivity.java PaymentActivity.java

1:Project

Android

app

- manifests
- java
- edu.udayton
- MainActivity.java
- PaymentActivity.java
- edu.udayton
- edu.udayton

Resource Manager

generatedJARs

res

- drawables
- layout
- mipmap
- values
- color
- dimens
- strings
- styles

Gradle Scripts

Layout Captures

2:Structure

Build Variants

2:Favorites

Build Activity

PaymentActivity

activity_payment.xml PaymentActivity.java MainActivity.java

```
numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

monthlyPaymentAmount = 0; // output variable

// continue if all persistent data was retrieved
if (numberOfYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)

    calculate and display the monthly payment amount in the txtMonthlyPayment TextView
    monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberOfYears))) /
        (MONTHS_PER_YEAR * numberOfYears);
    String outputString = MONTHLY_PAYMENT_PREFIX + currency.format(monthlyPaymentAmount);
    txtMonthlyPayment.setText(outputString);

    display the appropriate number of years image in the imgYears ImageView
    switch (numberOfYears)
        case 3:
            imgYears.setImageResource(R.drawable.three);
            break;
        case 4:
            imgYears.setImageResource(R.drawable.four);
            break;
        case 5:
            imgYears.setImageResource(R.drawable.five);
            break;
        default:
            // incredibly unlikely chance that the number of years is invalid
            Toast toast = Toast.makeText(PaymentActivity.this,
                "Invalid number of years (weird!!!): " + numberOfYears,
                Toast.LENGTH_LONG);
            toast.show();
            break;
    } // end switch
}
```

Bring up the running apps

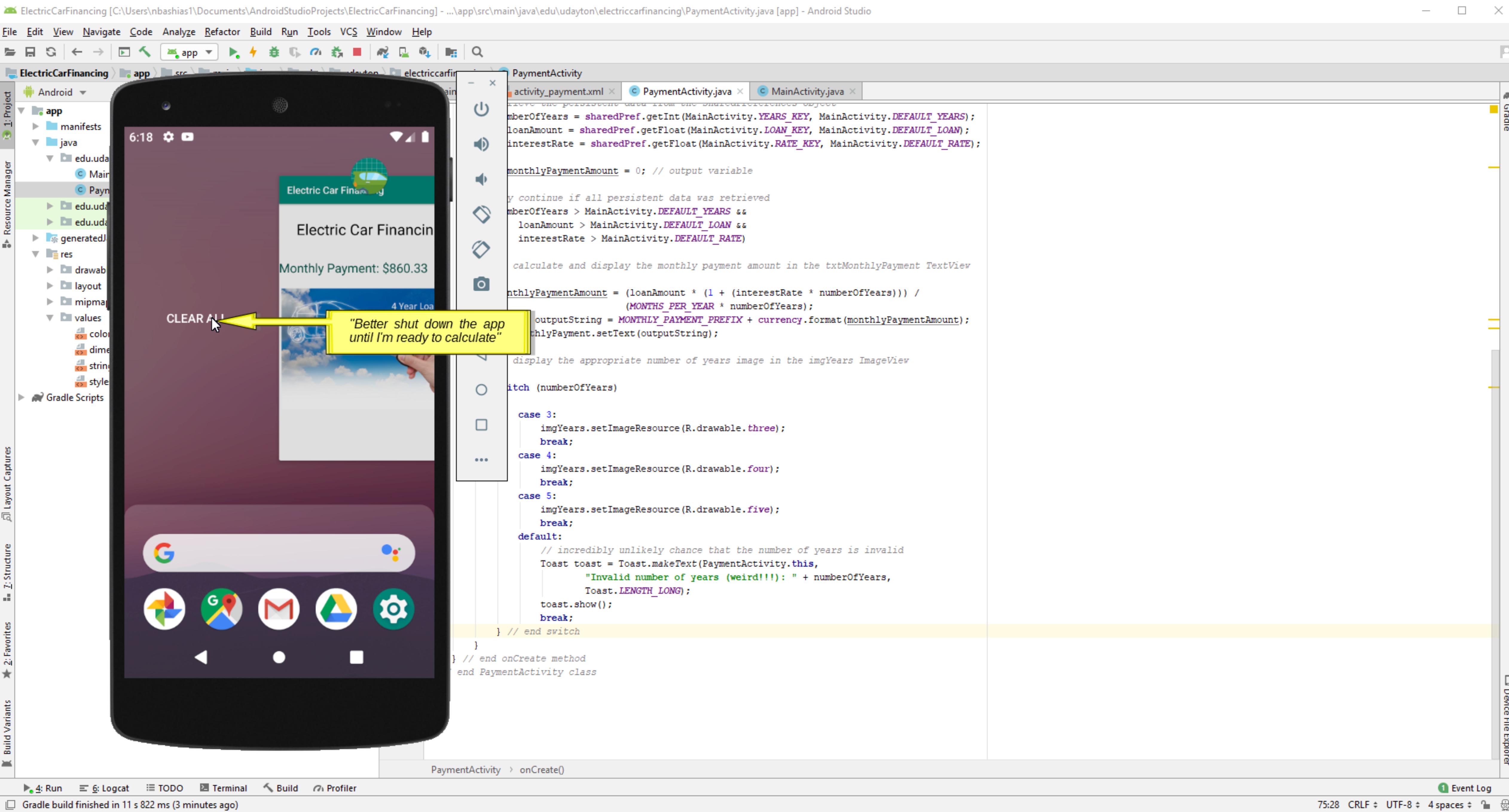
PaymentActivity > onCreate()

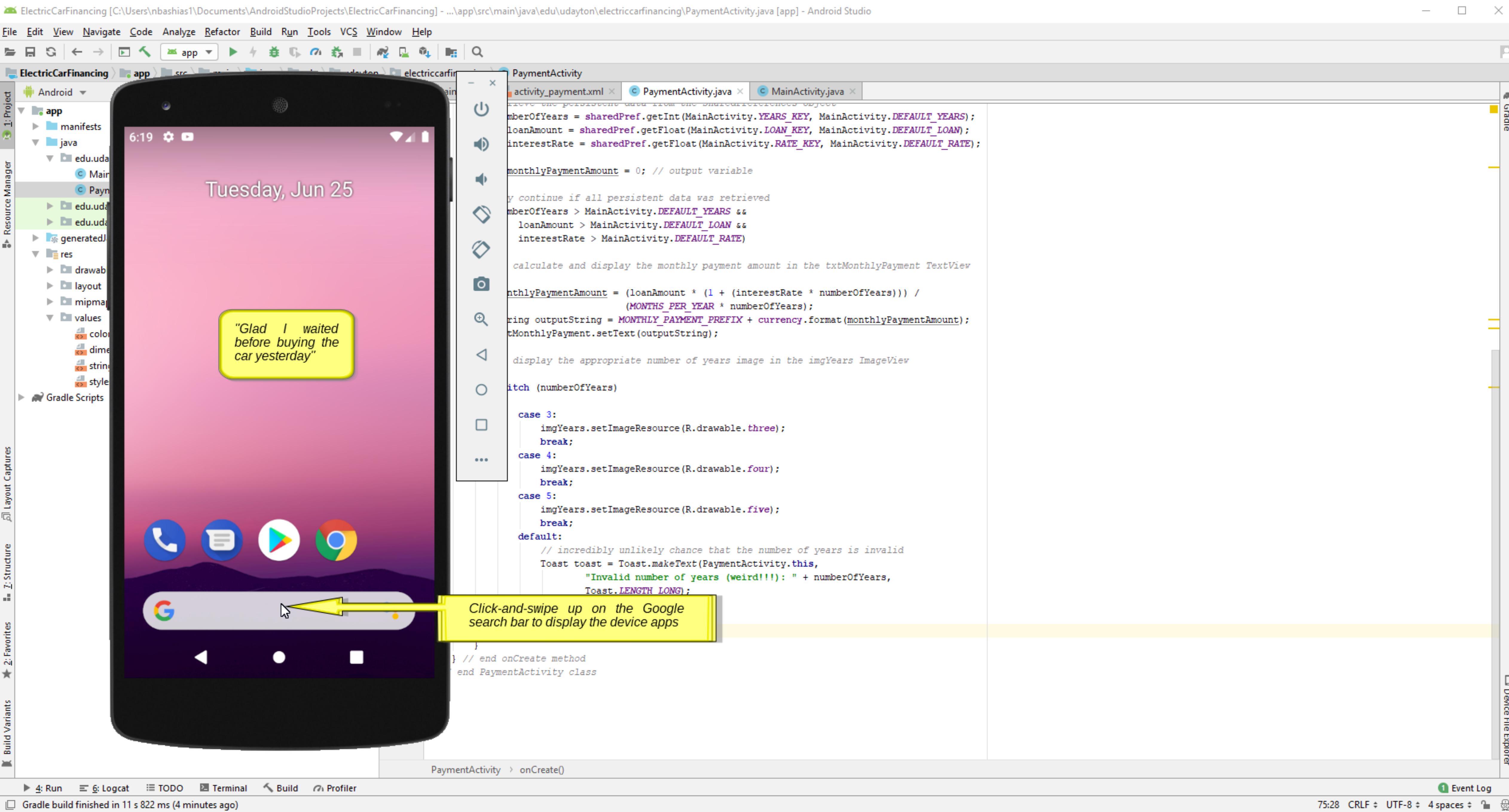
Run Logcat TODO Terminal Build Profiler

Gradle build finished in 11 s 822 ms (3 minutes ago)

75:28 CRLF UTF-8 4 spaces

Event Log





ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src \ main \ java \ edu \ udayton \ electriccarfinancing \ PaymentActivity.java

1:Project

Resource Manager

Android

app

- manifests
- java
 - edu.udayton
 - MainActivity.java
 - PaymentActivity.java
- generatedJARs
- res
 - drawables
 - layout
 - mipmap
 - values
 - colors.xml
 - dimens.xml
 - strings.xml
 - styles.xml

Gradle Scripts

Layout Captures

Z:Structure

Favorites

Build Variants

2:Favorites

Device File Explorer

PaymentActivity

activity_payment.xml x PaymentActivity.java x MainActivity.java x

```
numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

monthlyPaymentAmount = 0; // output variable

// continue if all persistent data was retrieved
if (numberOfYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)

    calculate and display the monthly payment amount in the txtMonthlyPayment TextView
    monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberOfYears))) /
        (MONTHS_PER_YEAR * numberOfYears);
    String outputString = MONTHLY_PAYMENT_PREFIX + currency.format(monthlyPaymentAmount);
    txtMonthlyPayment.setText(outputString);

    display the appropriate number of years image in the imgYears ImageView
    imgYears.setImageResource(R.drawable.three);
    break;
case 4:
    imgYears.setImageResource(R.drawable.four);
    break;
case 5:
    imgYears.setImageResource(R.drawable.five);
    break;
default:
    // incredibly unlikely chance that the number of years is invalid
    Toast toast = Toast.makeText(PaymentActivity.this,
        "Invalid number of years (weird!!!): " + numberOfYears,
        Toast.LENGTH_LONG);
    toast.show();
    break;
} // end switch
} // end onCreate method
end PaymentActivity class
```

PaymentActivity > onCreate()

Run Logcat TODO Terminal Build Profiler Event Log

Gradle build finished in 11 s 822 ms (4 minutes ago) 75:28 CRLF UTF-8 4 spaces

"Time to re-calculate with the new loan information"

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src java MainActivity.java PaymentActivity.java

1:Project Resource Manager

Android app manifests java edu.udayton MainActivity.java PaymentActivity.java generatedJARs res drawables layout mipmaps values colors dimensions strings styles Gradle Scripts

Layout Captures Z:Structure Favorites 2:Favorites Build Variants Device File Explorer

PaymentActivity

activity_payment.xml PaymentActivity.java MainActivity.java

```
numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

monthlyPaymentAmount = 0; // output variable

// continue if all persistent data was retrieved
if (numberOfYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)

    calculate and display the monthly payment amount in the txtMonthlyPayment TextView
    monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberOfYears))) /
        (MONTHS_PER_YEAR * numberOfYears);
    String outputString = MONTHLY_PAYMENT_PREFIX + currency.format(monthlyPaymentAmount);
    txtMonthlyPayment.setText(outputString);

    display the appropriate number of years image in the imgYears ImageView
    switch (numberOfYears)

        case 3:
            imgYears.setImageResource(R.drawable.three);
            break;
        case 4:
            imgYears.setImageResource(R.drawable.four);
            break;
        case 5:
            imgYears.setImageResource(R.drawable.five);
            break;
        default:
            // incredibly unlikely chance that the number of years is invalid
            Toast toast = Toast.makeText(PaymentActivity.this,
                "Invalid number of years (weird!!!): " + numberOfYears,
                Toast.LENGTH_LONG);
            toast.show();
            break;
    } // end switch
} // end onCreate method
end PaymentActivity class
```

PaymentActivity > onCreate()

Run Logcat TODO Terminal Build Profiler

Gradle build finished in 11 s 822 ms (4 minutes ago) 75:28 CRLF UTF-8 4 spaces

Event Log

The screenshot shows an Android application named "Electric Car Financing" running in the Android Studio IDE. The application's main screen is displayed on the left, showing a title bar "Electric Car Financing" and a section titled "Car Payment" featuring a hand-drawn illustration of a car being charged at a power outlet. Below this, there are three input fields: a dropdown menu set to "Four", a text field containing "35600.0", and a text field containing "4.0". A yellow callout box labeled "Enter the new term" points to the dropdown. Another yellow callout box labeled "Here's the previous loan information" points to the text field containing "4.0". The right side of the interface shows the Java code for the "PaymentActivity" class, specifically the "onCreate()" method. The code handles user input for loan amount, interest rate, and number of years, calculates the monthly payment, and displays the result along with an icon indicating the number of years. The code uses shared preferences to store persistent data and includes error handling for invalid year inputs.

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src Main electriccarfinancing PaymentActivity.java

1-Project

Android

app

- manifests
- java
- edu.udayton
- MainActivity.java
- PaymentActivity.java
- edu.udayton
- edu.udayton

Resource Manager

generatedJARs

res

- drawables
- layout
- mipmap
- values
- colors
- dimens
- strings
- styles

Gradle Scripts

Layout Captures

2-Structure

Favorites

Build Variants

2-Favorites

Device File Explorer

PaymentActivity

activity_payment.xml x PaymentActivity.java x MainActivity.java x

```
numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

monthlyPaymentAmount = 0; // output variable

// continue if all persistent data was retrieved
if (numberOfYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)

    calculate and display the monthly payment amount in the txtMonthlyPayment TextView
    monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberOfYears))) /
        (MONTHS_PER_YEAR * numberOfYears);
    String outputString = MONTHLY_PAYMENT_PREFIX + currency.format(monthlyPaymentAmount);
    txtMonthlyPayment.setText(outputString);

    display the appropriate number of years image in the imgYears ImageView
    switch (numberOfYears)

        case 3:
            imgYears.setImageResource(R.drawable.three);
            break;
        case 4:
            imgYears.setImageResource(R.drawable.four);
            break;
        case 5:
            imgYears.setImageResource(R.drawable.five);
            break;
        default:
            // incredibly unlikely chance that the number of years is invalid
            Toast toast = Toast.makeText(PaymentActivity.this,
                "Invalid number of years (weird!!!): " + numberOfYears,
                Toast.LENGTH_LONG);
            toast.show();
            break;
    } // end switch
} // end onCreate method
end PaymentActivity class
```

PaymentActivity > onCreate()

Run Logcat TODO Terminal Build Profiler

Gradle build finished in 11 s 822 ms (4 minutes ago)

Event Log

75:28 CRLF ÷ UTF-8 ÷ 4 spaces ÷

A screenshot of an Android application titled 'Electric Car Financing'. The main screen displays the title 'Electric Car Financing' and a dropdown menu for 'Number of Years' with options 'Three', 'Four', and 'Five'. A yellow callout box with a yellow arrow points from the word 'Five' to a yellow toast message box containing the text: "Wow, I can't believe the dealer let me purchase the car with a 5-year loan!".

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src java MainActivity.java PaymentActivity.java

1:Project

Resource Manager

Electric Car Financing

Electric Car Financing

Five

35600.0

4.0

Car Payment

"I sure hope the monthly payment goes below \$750.00..."

Android

app manifests java edu.udayton MainActivity.java PaymentActivity.java

Resource Manager

res drawables layout mipmaps values

values colors dimensions strings styles

Gradle Scripts

Layout Captures

Z-Structure

Favorites

Build Variants

Device File Explorer

PaymentActivity

```
activity_payment.xml x PaymentActivity.java x MainActivity.java x

numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

monthlyPaymentAmount = 0; // output variable

// continue if all persistent data was retrieved
if (numberOfYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)

    calculate and display the monthly payment amount in the txtMonthlyPayment TextView
    monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberOfYears))) /
        (MONTHS_PER_YEAR * numberOfYears);
    String outputString = MONTHLY_PAYMENT_PREFIX + currency.format(monthlyPaymentAmount);
    txtMonthlyPayment.setText(outputString);

    display the appropriate number of years image in the imgYears ImageView
    switch (numberOfYears)
        case 1:
            imgYears.setImageResource(R.drawable.one);
            break;
        case 2:
            imgYears.setImageResource(R.drawable.two);
            break;
        case 3:
            imgYears.setImageResource(R.drawable.three);
            break;
        case 4:
            imgYears.setImageResource(R.drawable.four);
            break;
        case 5:
            imgYears.setImageResource(R.drawable.five);
            break;
        default:
            // incredibly unlikely chance that the number of years is invalid
            Toast toast = Toast.makeText(PaymentActivity.this,
                "Invalid number of years (weird!!!): " + numberOfYears,
                Toast.LENGTH_LONG);
            toast.show();
            break;
    } // end switch
} // end onCreate method
end PaymentActivity class
```

PaymentActivity > onCreate()

Run Logcat TODO Terminal Build Profiler

Gradle build finished in 11 s 822 ms (4 minutes ago)

75:28 CRLF UTF-8 4 spaces

Event Log

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...app\src\main\java\edu\udayton\electriccarfinancing\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src \ PaymentActivity.java

1-Project

Resource Manager

Android

app

- manifests
- java
- edu.udayton
- MainActivity.java
- PaymentActivity.java
- edu.udayton
- edu.udayton

generatedJARs

res

- drawables
- layout
- mipmap
- values
- color
- dimens
- strings
- style

Gradle Scripts

Layout Captures

2-Structure

Favorites

Build Variants

2-Favorites

Device File Explorer

PaymentActivity

activity_payment.xml x PaymentActivity.java x MainActivity.java x

```
numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

monthlyPaymentAmount = 0; // output variable

// continue if all persistent data was retrieved
if (numberOfYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)

    calculate and display the monthly payment amount in the txtMonthlyPayment TextView
    monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberOfYears))) /
        (MONTHS_PER_YEAR * numberOfYears);
    outputString = MONTHLY_PAYMENT_PREFIX + currency.format(monthlyPaymentAmount);
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            imgYears.setImageResource(R.drawable.two);
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        case 3:
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            imgYears.setImageResource(R.drawable.four);
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                "Invalid number of years (weird!!!): " + numberOfYears,
                Toast.LENGTH_LONG);
            toast.show();
            break;
    } // end switch
}
} // end onCreate method
end PaymentActivity class
```

PaymentActivity > onCreate()

Run Logcat TODO Terminal Build Profiler

Gradle build finished in 11 s 822 ms (4 minutes ago)

75:28 CRLF ÷ UTF-8 ÷ 4 spaces ÷

Event Log

A yellow callout box points from the text "Yay! I can buy my new electric car!" in the code editor to the "Monthly Payment: \$712" text on the device screen.

The device screen shows the "Electric Car Financing" application. The title bar says "6:19". The main content area displays "Electric Car Financing" and "Monthly Payment: \$712". Below this is an image of a hand holding a white silhouette of a car against a blue sky with white clouds. The text "5 Year Loan" is overlaid on the image.

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src Main electriccarfinancing PaymentActivity.java

1:Project

Android

app

- manifests
- java
- edu.udayton
- MainActivity.java
- PaymentActivity.java
- edu.udayton
- edu.udayton

Resource Manager

generatedJARs

res

- drawables
- layout
- mipmap
- values
- colors
- dimens
- strings
- styles

Gradle Scripts

Layout Captures

2:Structure

Build Variants

Favorites

Build Activity

PaymentActivity

activity_payment.xml PaymentActivity.java MainActivity.java

```
numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

monthlyPaymentAmount = 0; // output variable

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if (numberOfYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)

    calculate and display the monthly payment amount in the txtMonthlyPayment TextView
    monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberOfYears))) /
        (MONTHS_PER_YEAR * numberOfYears);
    String outputString = MONTHLY_PAYMENT_PREFIX + currency.format(monthlyPaymentAmount);
    txtMonthlyPayment.setText(outputString);

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        case 3:
            imgYears.setImageResource(R.drawable.three);
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            break;
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            // incredibly unlikely chance that the number of years is invalid
            Toast toast = Toast.makeText(PaymentActivity.this,
                "Invalid number of years (weird!!!): " + numberOfYears,
                Toast.LENGTH_LONG);
            toast.show();
            break;
    } // end switch
```

PaymentActivity > onCreate()

4: Run 6: Logcat TODO Terminal Build Profiler 1 Event Log

Gradle build finished in 11 s 822 ms (4 minutes ago) 75:28 CRLF UTF-8 4 spaces

"I'm done with the app for now; may as well shut it down"

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...app\src\main\java\edu\udayton\electriccarfinancing\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src \MainActivity.java \PaymentActivity.java \PaymentActivity.xml

1:Project

Android

app

- manifests
- java

 - edu.udayton

 - MainActivity.java
 - PaymentActivity.java

 - generatedJars
 - res

 - drawables
 - layout
 - mipmap
 - values
 - colors.xml
 - dimens.xml
 - strings.xml
 - styles.xml

Resource Manager

Gradle Scripts

Layout Captures

2:Structure

Build Variants

2:Favorites

Build Activity

PaymentActivity

activity_payment.xml PaymentActivity.java MainActivity.java

```
numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

monthlyPaymentAmount = 0; // output variable

// continue if all persistent data was retrieved
if (numberOfYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)

    calculate and display the monthly payment amount in the txtMonthlyPayment TextView
    monthlyPaymentAmount = (loanAmount * (1 + (interestRate * numberOfYears))) /
        (MONTHS_PER_YEAR * numberOfYears);
    String outputString = MONTHLY_PAYMENT_PREFIX + currency.format(monthlyPaymentAmount);
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    display the appropriate number of years image in the imgYears ImageView
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        case 3:
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        default:
            // incredibly unlikely chance that the number of years is invalid
            Toast toast = Toast.makeText(PaymentActivity.this,
                "Invalid number of years (weird!!!): " + numberOfYears,
                Toast.LENGTH_LONG);
            toast.show();
            break;
    } // end switch
}
```

Bring up the running apps

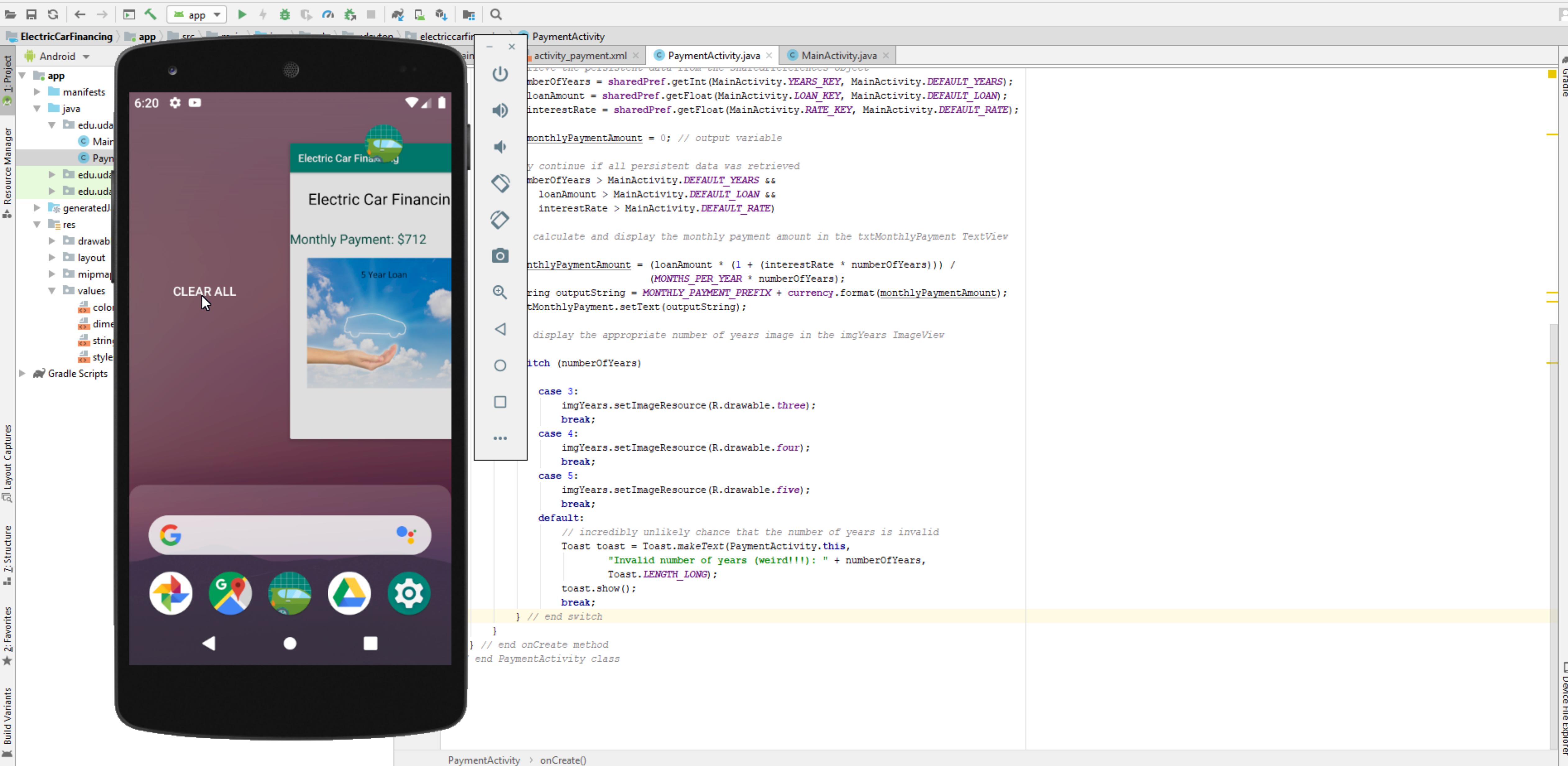
PaymentActivity > onCreate()

Run Logcat TODO Terminal Build Profiler

Gradle build finished in 11 s 822 ms (4 minutes ago)

75:28 CRLF UTF-8 4 spaces

Event Log



ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src Main electriccarfinancing PaymentActivity.java

1-Project

Android

app

- manifests
- java
- edu.udayton
- MainActivity.java
- PaymentActivity.java
- edu.udayton
- edu.udayton

generatedJARs

res

- drawables
- layout
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- values

 - colors
 - dimens
 - strings
 - styles

Gradle Scripts

Layout Captures

2-Structure

2-Favorites

Build Variants

PaymentActivity

activity_payment.xml x PaymentActivity.java x MainActivity.java x

```
numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
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interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

monthlyPaymentAmount = 0; // output variable

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    loanAmount > MainActivity.DEFAULT_LOAN &&
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                Toast.LENGTH_LONG);
            toast.show();
            break;
    } // end switch
} // end onCreate method
end PaymentActivity class
```

PaymentActivity > onCreate()

Run Logcat TODO Terminal Build Profiler

Gradle build finished in 11 s 822 ms (5 minutes ago)

75:28 CRLF ï=UTF-8 ï=4 spaces

Event Log

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...app\src\main\java\edu\udayton\electriccarfinancing\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src \MainActivity.java \PaymentActivity.java \PaymentActivity.java

1:Project

Resource Manager

Gradle

PaymentActivity

activity_payment.xml x PaymentActivity.java x MainActivity.java x

```
numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

monthlyPaymentAmount = 0; // output variable

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if (numberOfYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)

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    } // end switch
} // end onCreate method
end PaymentActivity class
```

6:20

Photos Maps Electric... Drive Settings

Calculator Calendar Camera Chrome Clock

Contacts Drive Duo Electric... Files

Gmail Google Maps Messages Phone

Photos Play Mo... Play Mu... Play Store Settings

WebView... YouTube

Device File Explorer

PaymentActivity > onCreate()

Run Logcat TODO Terminal Build Profiler Event Log

Gradle build finished in 11 s 822 ms (5 minutes ago) 75:28 CRLF UTF-8 4 spaces

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src Main electriccarfinancing PaymentActivity.java

1:Project

Resource Manager

Electric Car Financing

Electric Car Financing

Five

35600.0

"Wow, that is a good deal! But how much will it cost every month?"

4.0

Car Payment

Hand holding a car key with a plug.

PaymentActivity

activity_payment.xml PaymentActivity.java MainActivity.java

```
numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
loanAmount = sharedPref.getFloat(MainActivity.LOAN_KEY, MainActivity.DEFAULT_LOAN);
interestRate = sharedPref.getFloat(MainActivity.RATE_KEY, MainActivity.DEFAULT_RATE);

monthlyPaymentAmount = 0; // output variable

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if (numberOfYears > MainActivity.DEFAULT_YEARS &&
    loanAmount > MainActivity.DEFAULT_LOAN &&
    interestRate > MainActivity.DEFAULT_RATE)

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PaymentActivity > onCreate()

Run Logcat TODO Terminal Build Profiler

Gradle build finished in 11 s 822 ms (5 minutes ago)

75:28 CRLF UTF-8 4 spaces

Event Log

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...app\src\main\java\edu\udayton\electriccarfinancing\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src \MainActivity.java \PaymentActivity.java \PaymentActivity.xml

1:Project Resource Manager Layout Captures Z:Structure Favorites Build Variants Device File Explorer

Electric Car Financing

Electric Car Financing

Five

35600.0

4.0

Car Payment

"I'll show you"

Electric Car Financing

6:20

PaymentActivity

activity_payment.xml PaymentActivity.java MainActivity.java

```
numberOfYears = sharedPref.getInt(MainActivity.YEARS_KEY, MainActivity.DEFAULT_YEARS);
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PaymentActivity > onCreate()

Run Logcat TODO Terminal Build Profiler Event Log

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ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...\\app\\src\\main\\java\\edu\\udayton\\electriccarfinancing\\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src Main electriccarfinancing PaymentActivity.java

1:Project

Android

app

- manifests
- java
- edu.udayton
- MainActivity.java
- PaymentActivity.java
- edu.udayton
- edu.udayton

Resource Manager

generatedJARs

res

- drawables
- layout
- mipmap
- values
- colors
- dimens
- strings
- styles

Gradle Scripts

Layout Captures

2:Structure

Build Variants

2:Favorites

Build Variants

Device File Explorer

PaymentActivity

activity_payment.xml x PaymentActivity.java x MainActivity.java x

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PaymentActivity > onCreate()

Run Logcat TODO Terminal Build Profiler

Gradle build finished in 11 s 822 ms (5 minutes ago)

75:28 CRLF UTF-8 4 spaces

Event Log

ElectricCarFinancing [C:\Users\nbashias1\Documents\AndroidStudioProjects\ElectricCarFinancing] - ...app\src\main\java\edu\udayton\electriccarfinancing\PaymentActivity.java [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

ElectricCarFinancing app src \MainActivity.java \PaymentActivity.java \PaymentActivity.xml

1:Project

Android

app

- manifests
- java
- edu.udayton
- MainActivity.java
- PaymentActivity.java
- edu.udayton
- edu.udayton

Resource Manager

generatedJARs

res

- drawables
- layout
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- color
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Gradle Scripts

Layout Captures

2:Structure

Build Variants

2:Favorites

Build Variants

Device File Explorer

PaymentActivity

activity_payment.xml PaymentActivity.java MainActivity.java

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                Toast.LENGTH_LONG);
            toast.show();
            break;
    } // end switch
} // end onCreate method
end PaymentActivity class
```

This concludes Lesson 7.

PaymentActivity > onCreate()

Run Logcat TODO Terminal Build Profiler

Gradle build finished in 11 s 822 ms (5 minutes ago)

75:28 CRLF UTF-8 4 spaces

Event Log