MOBI3002: A2 – UI – Calculator

Assignment Submission

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1. **Make the DisplayMessageActivity background change to the colour entered in the text message using 5 different colours.**

A screenshot of a computer program

AI-generated content may be incorrect.A screen shot of a yellow rectangular object

AI-generated content may be incorrect.

1. **Add your own message to the message sent to the activity, and display the whole message.**

A screen shot of a computer

AI-generated content may be incorrect. A screenshot of a cell phone

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1. **Add a delay in the DisplayMessageActivity onCreate() method...see if you can get "Skipped 61 frames!  The application may be doing too much work on its main thread.".**

A screen shot of a computer code

AI-generated content may be incorrect.

A screenshot of a computer screen

AI-generated content may be incorrect.

**3A. Why do you get the error?**

I get the error because when you yield a thread using Thread.Sleep, you are stopping all code after it from executing within the thread context. In the context of the main thread, it is responsible for drawing frames, that is why the error says “Skipped x frames” because it wasn’t able to draw those frames while the thread was sleeping or yielded.

**3B. How could you avoid it?**

Avoid yielding the main thread, the thread that draws frames. If you need certain code to sleep, you could spawn a new thread, and have the code within it’s context sleep, rather than halting the main thread.

**3C. What is the effect on usability of an Android App.?**

It will decrease the framerate of the app itself, which means that the app will appear choppy and “laggy” or slow. This ruins user experience and can lead the user to blaming the device they are using rather than the app itself.

1. **Change the position of the "Send" button (use the design view and drag and drop it somewhere else on the screen)**

A screenshot of a computer

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1. **Change the text in the "Send" button to something with your name in it.**

A screenshot of a phone

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1. **Change the hint text from "Enter a colour" to something with your name in it ("Enter message to Russ").**

A screen shot of a computer program

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1. **Change the name of the 2nd activity from "DisplayMessageActivity" to something with your name in it. (use strings.xml file... From the code line 13 of DisplayMessageActivity class... public class DisplayMessageActivity extends AppCompatActivity {}**

A screen shot of a computer program

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A screenshot of a phone

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**[80%] Part 2: Calculator**

1. **Create a working Calculator App.**

A screen shot of a computer program

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First change: Changed button text SUBTRACT to Subtrack, and then the two Button text to divide and multiply.

A screenshot of a computer program

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Second change: Changed the button ids to be more readable.

A screenshot of a computer

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Third change: Added the calculate function, with the plan on adding 3 more event listeners for the rest of the buttons.

A screen shot of a computer

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Fourth change: Added enums to act as the only 4 things the calculate function can do. Every time the calculate function is called, one of these 4 enums will be passed to the function, to be used in an if statement to determine correct calculation.

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Fifth Change: Added event listeners to the last 3 buttons: subtract, multiply and divide. Each passing their button and the enum for the type of calculation that they will perform.

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Sixth Change: Added the if statement to check which calculation should be performed based on the enum passed to the calculate function. So clicking the add button passes the add enum, etc. Done!

1. **input 2 numbers**

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1. **set 4 buttons (for add, subtract, multiply and divide)**

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AI-generated content may be incorrect.

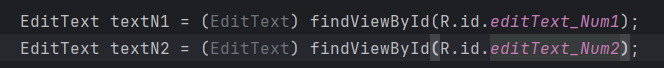
1. **one field for the answer (set as read-only)**

A screen shot of a computer code

AI-generated content may be incorrect.

Set as read only by setting focusable and clickable to false.

1. **id attributes are set properly  (don't leave it as editText....use a pattern that others can understand, such as editText\_Num1, editText\_Num2, etc...**

A screenshot of a computer program

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