

# Coursework Report

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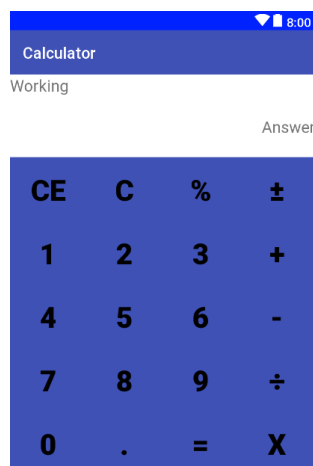
## 1 Introduction

I wanted to create a calculator application that the user would find easy to use but could also be used for more advanced equations. So, I sat down and made a list of what I thought what would be key features of a calculation application that would make it easy to use. The two major key points that stood out to me were, the application would have to stand out with large simple buttons that would allow the user to distinguish between them even if they have a visual impairment, the second key point was that I wanted the user to have quick and easy access to the calculations that they had already put through the calculator recently. An application that would fit all users. I would implement a button that would allow the user to easily switch between the simple to use calculator with limited calculation capabilities to the more complex and useful version that would allow users to solve more difficult equations without the need to buy a smart calculator.

I got the inspiration for the calculation history aspect through personal frustration with current default calculator applications that are starting to get clustered, so, if I had frustrating times with this then I was sure that other people would have too.

## 2 Implementation

I wanted to make the calculation section separate from where the users answer would appear. When implementing the design of the interface I found that it would be easier to split the working and the answer into two separate Text Views as shown below.



Once I finished the design of the calculator, I realised that with the connections that I had made with the widgets, the design would look different on other devices then the one that was originally tested. As shown below.



I implemented a try, catch so that the application wouldn't crash if the user tried to make the calculator do something that it isn't designed to do. Like in the screenshot below, where I tried to make the calculator work out the equation when the values were null. Instead of crashing the application prompts the user to select a value.

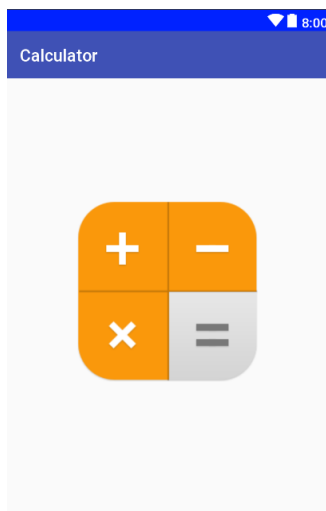


In its current state the user can add values, add, subtract, multiply, divide, use decimal points, can clear the equation and find the answer of their equation.

In the screenshot below it is shown that the application properly displays the answer in the correct format when the user entered 2+5=.

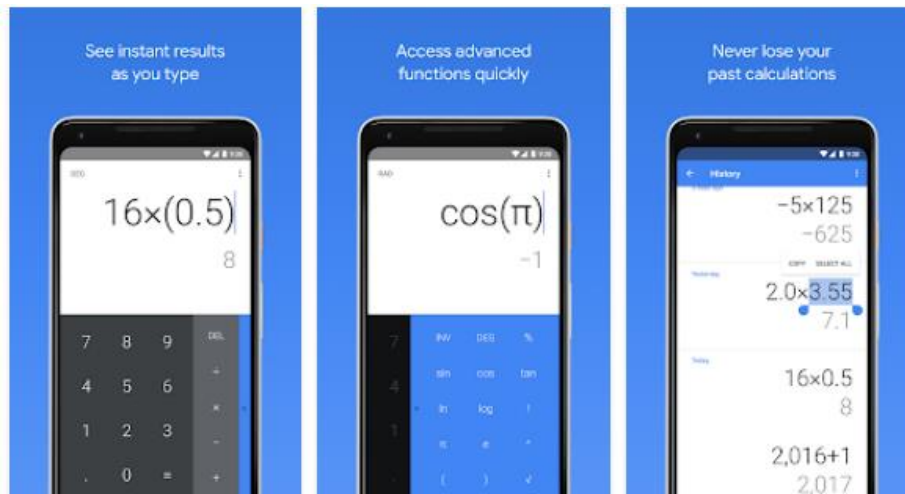


I also implemented a splash screen so that the user knows what application they are opening before it fully launches.



### 3 Critical Evaluation of Implementation

My calculator application has much to be improved and has a long way to go. With the application as it is now I have not even achieved a fully functional basic calculator let alone a calculator that is capable of calculation more complex equations. Compared to the calculator application made by Google LLC on the Google Play store. Their interface looks neat, clean, easy on the eyes and modern where as my application doesn't look terrible it looks a lot less professional.



For my application to improve I would need to first complete the basic version of it first by figuring out a way to allowing the user to put more than two variables into the calculation, implementing percentage and also implementing the positive and negative feature.

## 4 Personal Evaluation

Honestly, I cannot say that I performed well in creating this application. For my level of experience, I made my goal way too large and would not have been able to get close to the end product that I envisioned within the time frame that I had. I am disappointed with myself with the level of work that I have done, and I believe that I could have made a much better application. I should have picked a different application idea that I would have been more enthusiastic about, then I believe I would have been more inclined to make it the best application I could.

## 5 References

Splash screen image 15/03/2018 -

[https://www.iconfinder.com/icons/171352/calculator\\_icon#size=256](https://www.iconfinder.com/icons/171352/calculator_icon#size=256)