# 2a.

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| The Ceaser cipher app is a decryption app. It is written in the language blocky. The purpose of the app is to decrypt a string with a Caesar cipher and also encrypt a string with a Caesar cipher. The app takes a string inputted by the user and shifts the characters by the shift that the user gave the app. The app will then output the encrypted text to the user. The user then can put this text back into the text with the same shift and the app will decrypt it for them. |

# 2b.

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| I started my app by learning how the mobile CSP rubric wanted an encrypt procedure to be made. After I figured this out I was able to check over this and debug it to make sure that it worked. I ran into some problems with the code that was provided because it failed to decrypt the first letter of the code. I tried over and over again to fix this, I rewrote the procedure multiple times each time with a different difficulty. The code was the same each time I rewrote it but app inventor kept making new errors like putting the letter t in front of each encrypted thing or just not encrypting random letters. To make my app better I decided to re work the UI to make it easier to see what your decrypted text was. |

# 2c.

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| I created the following algorithm to encrypt the text that the user inputs. The first algorithm used shifts the alphabet to the correct decrypt alphabet. This is contained in another procedure called initCipherAlphabet. I put it into its own procedure so that it's easier to call when I do my decrypt function. The second algorithm encrypts the text by shifting the letters in the users given input according to the shifted alphabet given from the previous procedure. Together these algorithms combine to create my encryption code. |

# 2d.

**Writing prompts for success** (Do not use these exact words! Use your own words!)

My app uses the abstraction [procedure/etc] to [reduce] [organize] the…. It also uses [logical] [mathematical] concepts to ….

**Write your 2d response here (< 200 words)**

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| My app uses the procedure below to decrypt the text that the user has just encrypted. I put this code into a procedure to lower the complexity of the already complex app. My app also uses logical and mathematical concepts such as an if index is zero, this if statement is used to tell the app if it is done decrypting. If it is not done then it continues decrypting the text The first part of my code initializes the local variables, chr,index, and plaintext. After doing this I call my other procedure to shift the alphabet. After the alphabet is shifted then I start switching out each of the letters in the users string with the corresponding letters from the shifted alphabet. Once it switches a letter it uses math and logic to check if it is done encrypting if not it encrypt another character. If it is done then will display the decrypted text. |

