Begin

Initialize a string for name

Initialize a int for num

Initialize a char for letter

Initialize a string for key

Initialize a string for keyString with “ “

Initialize a string for shift with “ “

Initialize a string for plaintext

Initialize a string for encrypted with “ “

Initialize a int for textLength to 0

Start a do-while loop

Cout message to the user and gets their name

Cout message to to user about their name

Cout message of what option to do and obey command

Cout second message of what option to do and obey command

Cin their name

If statement with according to response

Switch statement from response

Case 1 gets to do the first option for the user to encrypt

Cout message for getting a alphabet

Cin for the key

While loop

Cout message with entering only English alphabet

Cin key

Ends while loop

Cout message for encryption

Cin plaintext

While loop

Cout message with only English alphabet

Cin plaintext

End while loop

textLength equal to plaintext.length()

keyString equal to get\_key\_string(key,textLength)

encrypt equal (plaintext, keyString)

cout messageto display encrypt

break

Case 2

call function calldecrypt

break

default message of error

end switch

else statement

cout message not right number

end else statement

cout message to restart

cin letter

if statement

system clear

end if statement

cin.ignore

End do-while loop

End

PROTOTYPE

CheckAlpha function

Initialize bool function with flag equal true

For loop

When input.length() and flag equal true

If input true return flag equal one

If input false return flag equal 0

Return flag

Get\_key\_string function

Initialize string with keyString equal “ “

If statement

For loop

Key.length() is assign to j %

KeyString contains key for each iteration.

Return KeyString

Else statement

For loop

Key[i] will iterate and assign to KeyString

Return KeyString

End else statement

String encrypt function

Initialize string encrypt with “ “

For loop

When I is less than input.length(), iterate.

Initialize a variable to shift and assign to char keyword

Initialize int shift which is assign to ASCII\_to\_int(Keyword)

If statement

Char containing input to subtract 65 and adds shift variable

Else

Char containing input subtract 97 and adds shift variable to encrypt

Return encrypted

int decrypt function

initialize string decrypted equal to “ “

for loop

keyString is shifting assign to char keyword

ASCII\_to\_int(Keyword) is assign to int shift

If-else statement

Char with input subtract 65 and subtract shift is assign tp decrypt

Else

Char input – 97 – shift is assign to decrypt

Return decrypted

ASCII\_to\_int(char key) function

If statement

Return key – =65 to restrict range

Else if statement (islower(key))

Return key -=97

Calldecrept function

Initialize string cipherText

Initialize string key

Initialize string keyString

Initialize string decrypted

Initialize int textLength equal 0

Cout message for decrypt

Cin key

While loop

Cout message for alphabet statement

Cin key

End loop

Cout message to decrypt

Cin cipherText

While loop

Cout message

Cin cipherText

End while loop

textLength has cipherText.length() assign to

get\_key\_string is assign to keyString

decrypt containing cipherText, and keyString is assign to decrepted

cout message to display decrepted

end call functions