

```
//disgusting program to encrypt and decrypt messages in caesar cipher

var words = getColumn("Words","Word");

var filteredWords = [];

var alphabetList = ["a", "b", "c", "d", "e", "f", "g", "h", "i", "j", "k", "l", "m", "n", "o", "p", "q", "r",
"s", "t", "u", "v", "w", "x", "y", "z"];

var encryptNumber = 1;

var foundMessages = [];

var counter = 0;


//hide ui for autodecrypter

hideElement("messageFoundText");

hideElement("changeFoundMessageButton");


//onEvent to encrypt message inputted to the amount set by user

onEvent("encryptButton","click",function(){

    setText("messageOutput", crypt(getText("messageInput"), encryptNumber));

});


//onEvent to push alphabet over another letter

onEvent("addButton", "click", function(){

    if(encryptNumber == 25){

        encryptNumber = 1;

    }else{

        encryptNumber++;

    }

    setText("encryptionNumber", encryptNumber + " letter(s) shifted");

});
```

```
});
```

```
//onEvent to push alphabet back a letter
```

```
onEvent("minusButton", "click", function(){
```

```
    if(encryptNumber == 1){
```

```
        encryptNumber = 25;
```

```
    }else{
```

```
        encryptNumber--;
```

```
    }
```

```
    setText("encryptionNumber", encryptNumber + " letter(s) shifted");
```

```
});
```

```
//onEvent to take encrypted message and output possible decrypted messages
```

```
onEvent("autoDecryptButton", "click", function(){
```

```
    foundMessages = [];
```

```
    counter = 0;
```

```
    filteredWords = [];
```

```
    //if message is 25 characters or less, messages are filtered by 2 letter words and up
```

```
    if((getText("messageInput")).length > 25){
```

```
        for(var f = 0; f < words.length; f++){
```

```
            //messages larger than 25 are filtered by 4 letter words and up
```

```
            if(words[f].length >= 4){
```

```
                appendItem(filteredWords, words[f]);
```

```
            }
```

```
        }
```

```
    }else{
```

```

for(var g = 0; g < words.length; g++){
    if(words[g].length >= 2){
        appendItem(filteredWords, words[g]);
    }
}
}

for(var i = 0; i < 26; i++){
    var message = crypt(getText("messageInput"), i);

    //if any part of message matches with first 100 words in word list, then message is added
    to possible message list

    for(var a = 0; a < 100; a++){
        if((message.toLowerCase()).includes((filteredWords[a]).toLowerCase())){
            appendItem(foundMessages, message);
            break;
        }
    }
}

//checks if found message has more than four back to back consonants and removes
them if they do

// (works better than it sounds)

for(var d = 0; d < foundMessages.length; d++){
    var consonants = "bcdfghjklmnpqrstvwxyz";
    var consonantCount = 0;
    for(var e = 0; e < foundMessages[d].length; e++){
        if(consonants.includes(foundMessages[d].substring(e, e + 1)) && consonantCount < 5){
            consonantCount++;
        }
    }
}

```

```

    }else if(consonantCount < 5){
        consonantCount = 0;
    }else{
        removeItem(foundMessages, d);
        break;
    }
}
}

//if no message fits with word list, then message is sent back letting user know
if(foundMessages.length == 0){
    showElement("messageFoundText");
    setText("messageFoundText", "no messages found");
    setText("messageOutput", "");
    //shows only message found
}else if(foundMessages.length == 1){
    showElement("messageFoundText");
    setText("messageFoundText", "messages found = 1");
    setText("messageOutput", foundMessages[0]);
    //shows first message found, then shows option to change to another message
}else{
    showElement("messageFoundText");
    showElement("changeFoundMessageButton");
    setText("messageFoundText", "messages found = " + foundMessages.length);
    setText("messageOutput", foundMessages[0]);
}
});

```

```
//onEvent to switch to another message found by autodecrypt
```

```
onEvent("changeFoundMessageButton", "click", function(){
```

```
    if(counter == foundMessages.length-1){
```

```
        counter = 0;
```

```
    }else{
```

```
        counter++;
```

```
    }
```

```
    setText("messageOutput", foundMessages[counter]);
```

```
});
```

```
//function to encrypt a message in caesar cipher using message and number inputted
```

```
function crypt(message, number){
```

```
    hideElement("messageFoundText");
```

```
    hideElement("changeFoundMessageButton");
```

```
    var encryptedList = ["a", "b", "c", "d", "e", "f", "g", "h", "i", "j", "k", "l", "m", "n", "o", "p", "q",  
"r", "s", "t", "u", "v", "w", "x", "y", "z"];
```

```
    var encryptedMessage = "";
```

```
    //creates new alphabet based on number given
```

```
    for(var i = 0; i < number; i++){
```

```
        insertItem(encryptedList, 0, encryptedList[25]);
```

```
        removeItem(encryptedList, 26);
```

```
    }
```

```
    //loop to check for any characters that are not a letter
```

```
    for(var a = 0; a < message.length; a++){
```

```
        var miscCheck = 0;
```

```

for(var c = 0; c < 26; c++){
    if((message.toLowerCase()).substring(a, a+1) == alphabetList[c]){
        miscCheck++;
        break;
    }
}

//if character is a letter, takes corresponding letter from encrypted alphabet adds to the
message
if(miscCheck == 1){
    for(var b = 0; b < 26; b++){
        if((message.toLowerCase()).substring(a, a+1) == alphabetList[b]){
            encryptedMessage = encryptedMessage + encryptedList[b];
            break;
        }
    }
    //just adds it to message if not a letter
}else{
    encryptedMessage = encryptedMessage + message.substring(a, a+1);
}
}
return encryptedMessage;
}

```