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demo/week04

factAboutMe

code
eat
{sport
sleep
repeat

Today’s topic

Task solution:

- create a method that encode text from a file

```
1   Uif [fo pg Qzuipo
2   cz Ujn Qfufst
3
4   Cfbvujgvm jt cfuufs uibo vhmz/
5   Fyqmjdju jt cfuufs uibo jnqmjdju/
6   Tjnqmf jt cfuufs uibo dpnqmfy/
7   Dpnqmfy jt cfuufs uibo dpnqmjdbufe/
8   Gmbu jt cfuufs uibo oftufe/
9   Tqbstf jt cfuufs uibo efotf/
10  Sfbebcjmjuz dpvout/
```

...

Task solution

- Steps of my solution:

1. read the file
2. split it’s content by characters
3. check the character’s ASCII number
4. change the characters according to their ASCII number
5. join the whole text together and log it to the console

Task solution

2. Split external file's content first by lines,

```
function decodeText(fileName: string): string {
  let content: string[] = readFromFile(fileName).split('\r\n');
  let contentChar: string[][] = [];
```

then by characters:

```
content.forEach(e => contentChar.push(e.split('')));
```

Task solution

3. check the character's ASCII number:

```
'string'.charCodeAt(i)

i : index of character in the string
```

4. add character by it's ASCII number:

```
String.fromCharCode(n)

n : ASCII number of required character
```

Task solution

In my code:

```
for (let i = 0; i < contentChar.length; i++) {
  encodedText.push([]);
  encodedText[i].push([]);
  for (let j = 0; j < contentChar[i].length; j++) {
    if (contentChar[i][j] !== ' ') {
      encodedText[i][j] = String.fromCharCode(contentChar[i][j].charCodeAt(0) - 1);
    } else encodedText[i][j] = ' ';
  }
}
```

Task solution

5. join the text together first inside the array,

```
encodedText.forEach((e, i, a) => content.splice(i, 1, e.join('')));
```

then for all lines:

```
return content.join('\r\n');
```

Task solution

Whole function:

```
function decodeText(fileName: string): string {
  let content: string[] = readFromFile(fileName).split('\r\n');
  let contentChar: string[][] = [];
  let encodedText = [];
  if (content !== null) {
    content.forEach(e => contentChar.push(e.split('')));
    for (let i = 0; i < contentChar.length; i++) {
      encodedText.push([]);
      encodedText[i].push([]);
      for (let j = 0; j < contentChar[i].length; j++) {
        if (contentChar[i][j] !== ' ') {
          encodedText[i][j] = String.fromCharCode(contentChar[i][j].charCodeAt(0) - 1);
        } else encodedText[i][j] = ' ';
      }
    }
    encodedText.forEach((e, i, a) => content.splice(i, 1, e.join('')));
  }
  return content.join('\r\n');
}
console.log(decodeText('encoded-lines.txt'));
```

Task solution

Imput

```
Uif [fo pg Qzuipo
cz Ujn Qfufst

Cfbvujgvm jt cfuufs uibo vhmz/
Fyqmjdju jt cfuufs uibo jnqmjdju/
Tjnqmf jt cfuufs uibo dpnqmfy/
Dpnqmfy jt cfuufs uibo dpnqmjdbufe/
Gmbu jt cfuufs uibo oftufe/
Tqbstf jt cfuufs uibo efotf/
Sfbebcjmjuz dpvout/
...
```

Output

```
The Zen of Python
by Tim Peters

Beautiful is better than ugly.
Explicit is better than implicit.
Simple is better than complex.
Complex is better than complicated.
Flat is better than nested.
Sparse is better than dense.
Readability counts.
...
```

Takeaway

1. In case of unknown method try it with simple code

2. If you don’t know why it doesn’t work -> console.log()

Thank you for your attention!