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Tuesday, September 24, 2024   4:35 PM

```c
char **array = malloc(sizeof(*array) * count);
```
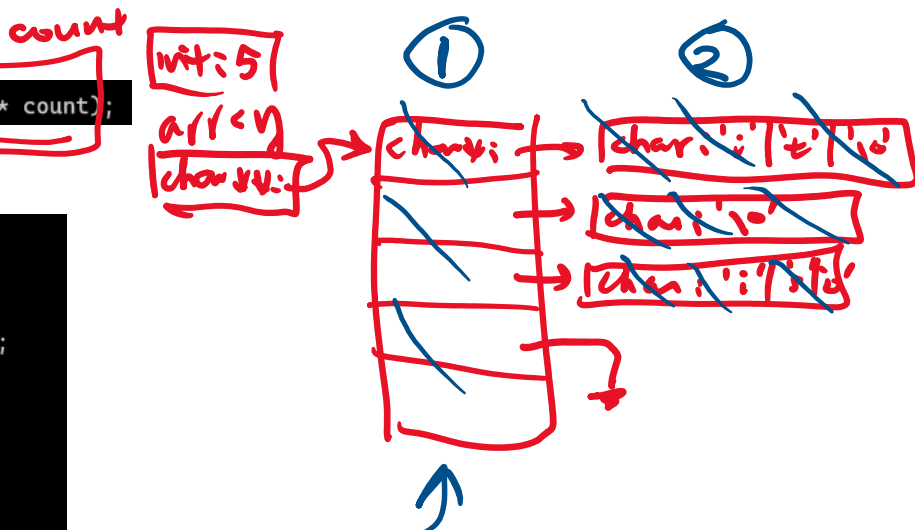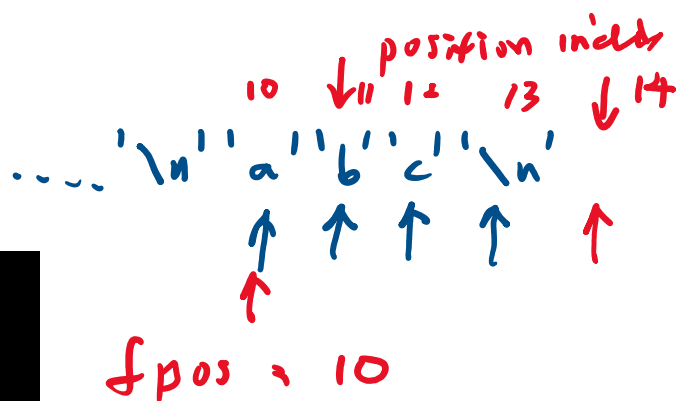
```c
fseek(fp, 0L, SEEK_SET);
count = 0;
int ch;
while ((ch = fgetc(fp)) != EOF) {
    array[count] = form_string(ch, fp);
    if (array[count] == NULL) {
        destroy_array(array, count);
        fclose(fp);
        return NULL;
    }
    count++;
}
```

*handwritten annotations: count, init: 5, array char**, position index 10 11 12 13 14 ... '\n' 'a' 'b' 'c' '\n', fpos = 10*

```c
long fpos = ftell(fp) - 1;
while (ch != '\n') {
    ch = fgetc(fp);
}
long new_fpos = ftell(fp);
int string_length = new_fpos - fpos;
char *str = malloc(sizeof(*str) * string_length);
if (str == NULL) {
    return NULL;
}
fseek(fp, -string_length, SEEK_CUR);
int j = 0;
while ((str[j] = fgetc(fp)) != '\n') {
    j++;
}
str[j] = '\0';
return str;
```

```c
array[0] = malloc(sizeof(*(array[0])) * fsize);
if (fread(array[0], sizeof(*(array[0])), fsize, fp) != fsize)
```
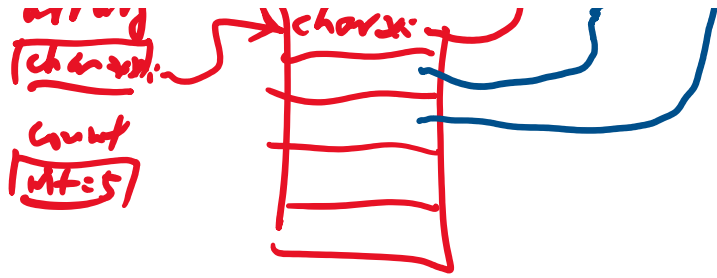
```c
int i = 0;
char *ptr = array[0];
for (i = 0; i < count; i++) {
    array[i] = ptr;
```

```
int i = 0;
char *ptr = array[0];
for (i = 0; i < count; i++) {
    array[i] = ptr;
    while (*ptr != '\n') {
        ptr++;
    }
    *ptr = '\0';
    ptr++;
}
```

array
char**
count
int = 5

char**
char...

```
char **array = malloc((sizeof(*array) * count) + (sizeof(*(array[0])) * fsize));
```

```
array[0] = (char *)&(array[count]);
```

count
int = 5
array
char**

char*:
char*: 'i' ...

array[0]
array[count] ↑