

```
1: #!/afs/cats.ucsc.edu/courses/cmps112-wm/usr/smalltalk/bin/gst -f
2: "$Id: charfreq.st,v 1.1 2019-02-01 14:36:25-08 -- $"
3: "Count frequency of input characters"
4:
5: nl := Character nl.
6:
7: Character extend [
8:   isPrint [
9:     ^ (Character space <= self) & (self <= $~)
10:   ]
11:   visible [
12:     self isPrint ifTrue: [^ '$', self asString]
13:     ifFalse: [^ self asInteger printStringRadix: 8]
14:   ]
15: ]
16:
17: Object subclass: ZeroArray [
18:   |theArray|
19:
20:   ZeroArray class >> new [
21:     self shouldNotImplement.
22:   ]
23:
24:   ZeroArray class >> new: size [
25:     |result|
26:     result := super new.
27:     result init: size.
28:     ^ result
29:   ]
30:
31:   init: size [
32:     theArray := Array new: size.
33:   ]
34:
35:   size [
36:     ^ theArray size.
37:   ]
38:
39:   at: index [
40:     ^ theArray at: index + 1.
41:   ]
42:
43:   at: index put: value [
44:     ^ theArray at: index + 1 put: value.
45:   ]
46:
47:   incr: index [
48:     (self at: index) isNil
49:     ifTrue: [ self at: index put: 0].
50:     self at: index put: (self at: index) + 1.
51:   ]
52:
53:   keysAndValuesDo: aBlock [
54:     (0 to: (self size) - 1) do: [:index |
55:       aBlock value: index value: (self at: index).
56:     ]
57:   ]
58:
```

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\$cmpls112-wm/Assignments/asg3-smalltalk-hzip/example-files
charfreq.st

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59:]

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60:
61:
62: freqtable := ZeroArray new: 256.
63:
64: [stdin atEnd not] whileTrue: [
65:     |ordChar|
66:     ordChar := stdin next asInteger.
67:     freqtable incr: ordChar.
68: ].
69:
70: freqtable keysAndValuesDo: [:key :value |
71:     (value notNil and: [value > 0]) ifTrue: [
72:         stdout << 'freq[' << key asCharacter visible << ']=' << value
73:         << nl.
74:     ]
75: ].
76:
77: "TEST: echo aaaaaaaaaa bbbbbb ccc | charfreq.st"
```

```
1: ::::::::::::::::::::::::::::::
2: mkst: echo aaaaaaaaaa bbbbb ccc | charfreq.st
3: ::::::::::::::::::::::::::::::
4: freq[8r12]=1
5: freq[$ ]=2
6: freq[$a]=10
7: freq[$b]=5
8: freq[$c]=3
9: :::::::::::Exit status 0
```