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 1: #!/afs/cats.ucsc.edu/courses/cmps112-wm/usr/smalltalk/bin/gst -f
 2: "$Id: charfreq.st,v 1.6 2012-02-23 18:57:46-08 - - $"
 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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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 bbbbb ccc | charfreq.st"
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1: ****mks**** echo aaaaaaaaaa bbbbb ccc | charfreq.st 2>&1
2: freq[8r12]=1
3: freq[$ ]=2
4: freq[$a]=10
5: freq[$b]=5
6: freq[$c]=3
7: ****status: 0x0000
8:
```