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1: #!/afs/cats.ucsc.edu/courses/cse112-wm/usr/smalltalk/bin/gst -f
2: "$Id: charfreq.st,v 1.3 2020-01-31 17:09:03-08 - - $"
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 [ ^ theArray size. ]
36:
37:   at: index [
38:     ^ theArray at: index + 1.
39:   ]
40:
41:   at: index put: value [
42:     ^ theArray at: index + 1 put: value.
43:   ]
44:
45:   incr: index [
46:     (self at: index) isNil
47:       ifTrue: [ self at: index put: 0].
48:     self at: index put: (self at: index) + 1.
49:   ]
50:
51:   keysAndValuesDo: aBlock [
52:     (0 to: (self size) - 1) do: [:index |
53:       aBlock value: index value: (self at: index).
54:     ]
55:   ]
56:
57: ]
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58:
59:
60: freqtable := ZeroArray new: 256.
61:
62: [stdin atEnd not] whileTrue: [
63:     |ordChar|
64:     ordChar := stdin next asInteger.
65:     freqtable incr: ordChar.
66: ].
67:
68: freqtable keysAndValuesDo: [:key :value |
69:     (value notNil and: [value > 0]) ifTrue: [
70:         stdout << 'freq[' << key asCharacter visible << ']=' << value
71:         << nl.
72:     ]
73: ].
74:
75: "TEST: echo aaaaaaaaaa bbbbbb ccc | charfreq.st"
```

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

```