

```
1: #!/afs/cats.ucsc.edu/courses/cmps112-wm/usr/smalltalk/bin/gst -f
2: "$Id: bitstream.st,v 1.1 2019-02-01 14:36:25-08 -- $"
3: execname := '$RCSfile: bitstream.st,v $' =~ '.*: (.*),v.*' at: 1.
4:
5: Character extend [
6:   isGraph [
7:     ^ (Character space < self) & (self <= $~)
8:   ]
9:   visible [
10:     self isGraph ifTrue: [^ '$', self asString]
11:     ifFalse: [^ self asInteger printStringRadix: 16]
12:   ]
13: ]
14:
15: Object subclass: BitStream [
16:   |bitIndex byte myStream|
17:   BitStream class >> new: fileStream [
18:     |result|
19:     result := super new.
20:     result init: fileStream.
21:     ^result
22:   ]
23:   init: fileStream [
24:     myStream := fileStream.
25:     bitIndex := 1.
26:   ]
27:   nextBit [
28:     bitIndex = 1 ifTrue: [
29:       byte := myStream next.
30:       bitIndex := 9.
31:     ].
32:     bitIndex := bitIndex - 1.
33:     ^byte value bitAt: bitIndex
34:   ]
35:   atEnd [
36:     ^bitIndex = 1 and: [myStream atEnd]
37:   ]
38:   currByte [
39:     ^byte
40:   ]
41: ]
42:
43: nl := Character nl.
44: stdinBits := BitStream new: stdin.
45: count := 0.
46: [stdinBits atEnd] whileFalse: [
47:   stdout << stdinBits nextBit.
48:   count := count + 1.
49:   count = 4 ifTrue: [stdout << ' '].
50:   count = 8 ifTrue: [
51:     stdout << ' ' << stdinBits currByte visible << nl.
52:     count := 0
53:   ].
54: ]
55:
56: "TEST: echo hello world | ./bitstream.st 2>&1"
57:
```

```
1: ::::::::::::::::::::::::::::::
2: mkst: echo hello world | ./bitstream.st 2>&1
3: ::::::::::::::::::::::::::::::
4: 0110 1000 $h
5: 0110 0101 $e
6: 0110 1100 $l
7: 0110 1100 $l
8: 0110 1111 $o
9: 0010 0000 16r20
10: 0111 0111 $w
11: 0110 1111 $o
12: 0111 0010 $r
13: 0110 1100 $l
14: 0110 0100 $d
15: 0000 1010 16rA
16: :::::::::::Exit status 0
```