

Character Numbers

This is a **warmup** exercise. It is **not compulsory**, and may be completed **individually or with your lab partner**.

In C, characters (letters, numbers, and symbols) are stored as numbers. There are 128 characters stored as 0-127. The first 0-31 characters are *control characters*, which don't print anything. Similarly, 127 is the delete character. Create a file called `characterNumbers.c` and write a program to print out the decimal and hexadeciml value of each non-control character (characters 32-126 inclusive), in order, with each line formatted like:

```
065 0x41 A
```

Expected Output

032 0x20
033 0x21 !
034 0x22 "
035 0x23 #
036 0x24 \$
037 0x25 %
038 0x26 &
039 0x27 '
040 0x28 (
041 0x29)
042 0x2a *
043 0x2b +
044 0x2c ,
045 0x2d -
046 0x2e .
047 0x2f /
048 0x30 0
049 0x31 1
050 0x32 2
051 0x33 3
052 0x34 4
053 0x35 5
054 0x36 6
055 0x37 7
056 0x38 8
057 0x39 9
058 0x3a :
059 0x3b ;
060 0x3c <
061 0x3d =
062 0x3e >
063 0x3f ?
064 0x40 @
065 0x41 A
066 0x42 B
067 0x43 C
068 0x44 D
069 0x45 E
070 0x46 F
071 0x47 G
072 0x48 H
073 0x49 I
074 0x4a J
075 0x4b K
076 0x4c L
077 0x4d M
078 0x4e N
079 0x4f O
080 0x50 P

```
081 0x51 Q
082 0x52 R
083 0x53 S
084 0x54 T
085 0x55 U
086 0x56 V
087 0x57 W
088 0x58 X
089 0x59 Y
090 0x5a Z
091 0x5b [
092 0x5c \
093 0x5d ]
094 0x5e ^
095 0x5f _
096 0x60 `
097 0x61 a
098 0x62 b
099 0x63 c
100 0x64 d
101 0x65 e
102 0x66 f
103 0x67 g
104 0x68 h
105 0x69 i
106 0x6a j
107 0x6b k
108 0x6c l
109 0x6d m
110 0x6e n
111 0x6f o
112 0x70 p
113 0x71 q
114 0x72 r
115 0x73 s
116 0x74 t
117 0x75 u
118 0x76 v
119 0x77 w
120 0x78 x
121 0x79 y
122 0x7a z
123 0x7b {
124 0x7c |
125 0x7d }
126 0x7e ~
```

To run some simple automated tests:

```
$ 1511 autotest characterNumbers
```

To run Styl-o-matic:

```
$ 1511 stylomatic characterNumbers.c
```

Looks good!

You'll get advice if you need to make changes to your code.

Submit your work with the *give* command, like so:

```
$ give cs1511 wk05_characterNumbers
```

Or, if you are working from home, upload the relevant file(s) to the `wk05_characterNumbers` activity on [Give Online](#).