

Can Corbin Crack It? : An Encoding Project

Computer Science

Name: _____

Period: _____

It is important to read all the directions for this lab / project, as outlined below.

Hello, Brennan Computer Science students. This is Mr. De la Peña. Our Computer Science TA this year is Brennan Senior Corbin Adamson. Corbin knows a lot about math and computer science, and he is pretty good at cracking codes. Let's give him a bit of a challenge. You are to encode a secret message, using the guidelines below.

It should be at least 15 characters long, and no more than 40 characters long. (Make sure it's school appropriate!)

Your message may include:

- upper and lower-case English letters
- numbers
- spaces (make sure to include these)
- punctuation marks
- Special characters, if they make sense in the message

Match each character (including symbols and whitespace) to its Unicode value in base-10.

Choose ANY number-base (anywhere from base-2 up to base-16, and NOT base-10). Convert all your Unicode values to this number-base, using symbols [0-9, A-F], as needed, and proper rules for place value. Be accurate with your math. **DO NOT SPECIFY WHICH NUMBER-BASE YOU ARE USING!!**

Then, create a new text document and title it "message.txt". On the first line of the text file, type in the total number of characters in your message. (Remember that whitespace counts as one character.) After that, type each Unicode value of your message, in order, expressing these as digits in your newly-converted base, with each set of digits on its own line.

Example: My message is: "Can Corbin Crack It?" Let me encode the message using Unicode values in Base-6.

Character	Base-10 Unicode Value	Base-6 Unicode Value
C	67	151
a	97	241
n	110	302
_	32	52
C	67	151
o	111	303
r	114	310
b	98	242
i	105	253
n	110	302
_	32	52
C	67	151
r	114	310
a	97	241
c	99	243
k	107	255
_	32	52
l	73	201
t	116	312
?	63	143

My text file would look like this:

20
151
241
302
52
151
303
310
242
253
302
52
151
310
241
243
255
52
201
312
143

Save a copy of the text document to your drive, then copy and paste it into "S:\TurnIn\DeLaPena-TurnIn\" (in your folder)