

Optional Extra Credit for Pack Lab

To get extra credit, you must submit a packed file to Gradescope with particular contents as specified below. If you can create the correct file and upload it to Gradescope, we'll give you the extra credit.

1. The file must be packed using the `-c` and `-k` flags (compression and checksum).
Do NOT encrypt the file.
2. The compression dictionary of the packed file must have the following sixteen ASCII characters in exactly this order:
`0, 1, 2, 3, 4, 5, 6, 7, 8, 9, a, b, c, d, e, f`

The dictionary's contents are the sixteen most frequently occurring characters in the file, sorted by how frequently they occur with the most frequent first. So `dictionary[0]` must contain the ASCII value `0` (in hexadecimal, `0x30`).

3. When unpacked, the file must be a text file. The first line of the file must be the seven characters "NetID: " (without the quotes) followed by your NetID. If you have a partner, an additional space character should be added and then your partner's NetID.

Example:

```
NetID: brg2345 nrg1136
```

After the first line, you MAY add any additional lines to the file as you please and they can have any contents.

4. The file's name (after packing) must be `extra_credit.ck.pack`

You can submit to Gradescope by adding the file to your list of submitted files:

```
~cs213/HANDOUT/submit213 submit --hw packlab unpack-utilities.c extra_credit.ck.pack
```

On Gradescope, we will 1) confirm that the file was packed correctly, 2) confirm that the compression dictionary matches our requirements, and 3) confirm that your NetID(s) are on the first line as specified when unpacked.