Lab 37.2: Using cpio for Backup

We are going to do essentially the same exercise now, but using **cpio** in place of **tar**. We'll repeat the slightly altered instructions for ease of use.

1. Create a directory called `backup` and in it place a compressed **cpio** archive of all the files under /usr/include, with the highest level directory being `include`. You can use any compression method (**gzip**, **bzip2** or **xzip**).
2. List the files in the archive.
3. Create a directory called `restore` and unpack and decompress the archive.
4. Compare the contents with the original directory the archive was made from.

Solution 37.2

1.
```
$ (cd /usr ; find include | cpio -c -o > /home/student/backup/include.cpio)
82318 blocks
```

   or to put it in a compressed form:

```
$ (cd /usr ; find include | cpio -c -o | gzip -c > /home/student/backup/include.cpio.gz)
82318 blocks
$ ls -lh include*
total 64M
-rw-rw-r-- 1 coop coop  41M Nov  3 15:26 include.cpio
-rw-rw-r-- 1 coop coop 6.7M Nov  3 15:28 include.cpio.gz
-rw-rw-r-- 1 coop coop 5.3M Nov  3 14:44 include.tar.bz2
-rw-rw-r-- 1 coop coop 6.8M Nov  3 14:44 include.tar.gz
-rw-rw-r-- 1 coop coop 4.7M Nov  3 14:46 include.tar.xz
```

2.
```
$ cpio -ivt < include.cpio
drwxr-xr-x  86 root     root            0 Oct 29 07:04 include
-rw-r--r--   1 root     root        42780 Aug 26 12:24 include/unistd.h
-rw-r--r--   1 root     root          957 Aug 26 12:24 include/re_comp.h
-rw-r--r--   1 root     root        22096 Aug 26 12:24 include/regex.h
.....
```

   Note the redirection of input; the archive is not an argument. One could also do:

```
$ cd ../restore
$ cat ../backup/include.cpio | cpio -ivt
$ gunzip -c include.cpio.gz | cpio -ivt
```

3.
```
$ rm -rf include
$ cpio -id < ../backup/include.cpio
$ ls -lR include
```

   or

```
$ cpio -idv < ../backup/include.cpio

$ diff -qr include /usr/include
```

