Jan 10 Tutorial

Bash: file as input and output

```
> x # save output to x
< x # read input from x
# these two can be combined
```

Bash: compile file.c

```
gcc hello.c -o hello # compile <hello.c> to output <hello>
./hello # you can run it in command line
```

Bash: more file stuff and diff

```
x | y: the eoutput of x as input of y
x && y: execute x and y from left to right
diff: compare two files; no outputs means the two files are the same.
# you can use diff to check if ur output is the same as expected.
```

♡Haskell♡: pattern-matching

```
data Lst = Empty
         | Cons Integer Lst

len :: Lst -> Integer
len Empty = 0
len (x:xs) = 1 + len xs

map :: (Integer -> Integer) -> Lst -> Lst
map _ Empty = Empty
map f (x:xs) = (cons (f x) (map f xs))

foldl :: (Integer -> Integer -> Integer) -> Integer -> Lst -> Lst
foldl _ z Empty = z
foldl f z (x:xs) = foldl f z' xs
    where z' = f z x
```

```
prepend :: Integer -> [[Integer]] -> [[Integer]]
prepend i [] = [i]
prepend i (n:ns) = [i n] : prepend i ns
```