CSC209H Worksheet: Error Checking

Type in the following program and run it to find out what happens when you try to call `strtol` on different strings.

```
#include <stdlib.h>
#include <stdio.h>
#include <errno.h>
#include <string.h>

int main(int argc, char **argv) {
    char *next = NULL;
    errno = 0;
    long longi = strtol(argv[1], &next, 0);
    int i = longi;

    printf("longi: %ld\n",longi);
    printf("i: %d\n",i);
    printf("next is |%s|\n",next);

    if(errno != 0) {
        perror("strtol");
    }
    return 0;
}
```

`argv[1]`	returned (`longi`)	`int (i)`	`next`	`errno` / `perror()` message
“42”	42	42	“”	0
“209S”	209	209	“S”	0
“0”	0	0	“”	0
“seven”	0	0	“seven”	0 or Invalid argument
“29.9”	29	29	“.9”	0 or Invalid argument
“B52”	0	0	“B52”	0 or Invalid argument
“9876543219876543219”	9223372036854775807	-1	“”	Result too large
“-32”	-32	-32	“”	0
“0x41”	65	65	“”	0

Note About Solutions: On some machines, `strtol` will set `errno` when no conversion takes place, but on others (like teach.cs), it just returns 0 and doesn't move `next`. Look at the man page to determine the behaviour of a particular implementation of `strtol`.