Systems Programming (2024 Fall)
Handwritten Assignment 2

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1. If we use `stat()` instead of `lstat()` and one of the arguments is a symbolic link, it would output information about the file that the link points to.

2. If the file mode creation mask is `777`, then the created file would have permission `000`.

3. We would get a segmentation fault.

```c
                                  ── 3_vfork.c ──
#include <stdio.h>
#include <sys/types.h>
#include <unistd.h>

void f() {
  pid_t pid = vfork();
  if (pid < 0) {
    perror("vfork");
    _exit(1);
  } else if (pid == 0) {  // Child
    printf("Child pid = %d\n", getpid());
    return;
  } else {
    printf("Parent after vfork\n");
  }
}

int main() {
  f();
  return 0;
}
```

```
$ gcc 3_vfork.c && ./a.out
Child pid = 1002226
Parent after vfork
[1]    1002225 segmentation fault (core dumped)  ./a.out
```

4. Because `unlink()` modifies the inode by decrementing the link count (`stat.st_nlink`), therefore the ctime (changed status time) will be modified.