

Final Paper Proposal

Colin Samplawski, Malcolm Reid, and Keith Funkhouser

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1 Introduction

Nearly every function from commonly used C libraries returns some value. In most cases, these values indicate something that is relevant to the functions operations, such as a file descriptor, number of bytes processed, or a pointer to some data. Additionally, most functions can return some predefined value that indicates that an error occurred during the function's execution. Unfortunately, many programmers have the bad habit of not checking these return values for such error conditions. In our work, we plan to analysis a suite of commonly used Linux applications and see if any do not correctly handle errors returned by commonly used system/library calls.

2 Motivation

In their paper (cite), Miller et al. modified the `malloc` library function to return `NULL` with some probability indicting that memory allocation has failed. They then tested a variety of Linux utilities using this this version of `malloc` to test if they correctly handled this error case. Surprisingly, the majority of these utilities did not correctly handle this case and crashed in a variety of ways. We plan to expand on this idea and test significantly more system/library calls in a similar way.

3 Methods/Process

4 A Small Example

5 Schedule

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Oct 24th	Oct 25th	Oct 26th	Oct 27th	Oct 28th	Oct 29th	Oct 30th
Oct 31st No class	Nov 1st	Nov 2nd No class	Nov 3rd	Nov 4th No class	Nov 5th	Nov 6th
Nov 7th	Nov 8th	Nov 9th	Nov 10th	Nov 11th	Nov 12th	Nov 13th
Nov 14th No class	Nov 15th	Nov 16th No class	Nov 17th	Nov 18th	Nov 19th	Nov 20th
Nov 21st	Nov 22nd	Nov 23rd	Nov 24th Thanksgiving recess	Nov 25th Thanksgiving recess	Nov 26th Thanksgiving recess	Nov 27th Thanksgiving recess
Nov 28th	Nov 29th	Nov 30th	Dec 1st	Dec 2nd	Dec 3rd	Dec 4th
Dec 5th No class	Dec 6th	Dec 7th No class	Dec 8th	Dec 9th Paper draft due to referees	Dec 10th	Dec 11th
Dec 12th	Dec 13th	Dec 14th	Dec 15th Paper reviews back to author	Dec 16th	Dec 17th	Dec 18th
Dec 19th Final project papers due	Dec 20th	Dec 21st Project Poster Session	Dec 22nd	Dec 23rd	Dec 24th	Dec 25th