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Homework 3 in CSE384: C Pointers and Memory

- 1) GDB can be used
  - a) to find out the memory leakages
  - b) to get the result of a particular expression in a program
  - c) to find the reason of segmentation fault
  - ☒ d) a, b, and c
- 2) Which GDB command can be used to put a breakpoint at the beginning of the program?
  - ☒ a) b main
  - b) b file.c:0
  - c) b start
  - d) break
- 3) Which operator returns the memory address of a variable?
  - A. asterisk (\*)
  - ☒ B. ampersand (&)
  - C. percent sign (%)
  - D. exclamation point (!)
- 4) A long integer pointer can be properly initialized by (Choose all that apply)
  - ☒ A. the address of a long integer variable
  - ☒ B. the value of an integer variable
  - ☒ C. the value of a floating point variable
  - ☒ D. the address of a short integer variable
- 5) What are the differences between "step" and "next" gdb commands?

step allows you to step into a function  
next steps over the function.
- 6) Use gdb to debug the following program. Include in your answer: 1) identify the buggy line and explain what the bug is, 2) include all the commands including shell/gcc commands and gdb commands that you used to find the bug.

```
#include<stdio.h>
#include<stdlib.h>
void fill(int *arr){
    int *array=malloc(2*sizeof(int));
```

Keep on getting error on gdb: not in executable format:  
File format not recognized.