UNIX

FT_PRINTF

What is ft_printf:

- The project ft_printf aims at getting you to recreate your own version of the libc printf function (man 3 printf). In order to do so, you need to have a basic understanding of the parameters and flags that printf accepts and works with. Remember - printf takes in a *const char ** (string) as its first parameter and the following arguments are all parameters that need to be printed within the *const char **.

How to run ft_printf *(if applicable)*:

- Same as your standard printf function:
    - ft_printf(const char *, ...);

Important to note on input:

- ft_printf takes in a variable amount of arguments. This means that there is no set number of arguments that the function accepts. At minimum, it will take a *const char ** as the first argument, and then any number of arguments thereafter.

Your output:

- Once formatted as required, ft_printf will output a string with the requested parameters instead of the original modifiers (the % arguments).

First steps:

- Ensure that you understand variable arguments and are able to use the functions and macros from the <stdarg.h> library. Remember - <stdarg.h> saves variable arguments into lists. Each data type is saved into its own list i.e. *ints* are saved into one list, *char ** into another etc.
- If your ft_printf input is:

    ft_printf(“Hello world my name is %s and I am %d %s”, “Anonymous”, 23, “years old”);

  In the *char ** list, the second item in the list will be a pointer to the memory in which the *int* list is saved, because the second item in the “printf variable list” is an integer and not a string.
- Have a solid understanding of link lists - it’s crucial
- See the notes below for resources
- Get your ft_printf working for basic input of each modifier. Remember - each modifier is for something specific.

Next steps:

- Work on formatting the output according to the flags.
- Do *extensive* error checking i.e. what if the number of parameters does not match the number of modifiers, what if a parameter doesn’t match it’s modifier etc

Notes:

- https://stackoverflow.com/questions/20402382/prototype-of-printf-and-implementation
- http://www.zentut.com/c-tutorial/c-linked-list/
- https://www.le.ac.uk/users/rjm1/cotter/page_30.htm