CS 497 Assignment 6

```
Name
     ccipher
Synopsis
     ccipher [OPTION] … [FILE]...

Description
     Caesar cipher the contents of FILE, then concatenate to standard
     output.

OPTIONS:
     -s NUM
          NUM represent the number of letters to shift
     -r
          -r should reverse or 'undue'.
          EX: -r -s 5: This will undue a message shifted 5.
     -n
          number all output lines
```

Use the open(), read(), and close() system calls to create a Caesar cipher application in C.

Take command line arguments for the number of letters to shift and for the name of the file to open, read, and close.

Read each letter in from the file, shift the requested number of places using the Caesar's cipher method, then redirect the output to stdout.

Use the provided cat application example as a starting point.

Example usage:

```
ccipher -s 5 input_file.txt
```

Undo a Caesar's cipher of 5 shifts from file.txt, redirect the output to a file:

```
ccipher -r -s 5 input_file.txt >> output_file.txt
```

Deliverables:

Provide a report to document and demonstrate your application with screenshots of your results. All screenshots should be nicely resized and annotated. Your document should show what you did, how you did it, display the results, and explain what happened.

In addition to documenting the creation and testing of your program, use Bash to find information about your running program. Find the process ID for your new program. Then identify the resources in use by your application, such as, CPU%, memory usage, time. Include this information in your report.

Submit your report and source code to Canvas by the posted deadline.