

# Application Day: Shell

## CMSC398W: Practical Tools For Efficient Development

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# [TODO List App] TODO List App

Today, we will create a command-line todo list manager that allows users to add, view, complete, and manage their tasks.

- Due on Friday @ 11:59 PM
- Should be able to complete in class
- Graded on good-faith attempt

# Setup

Copy the script from the website into a local `todo.sh`

We will start with the add functionality and then add others as we go.

## Add function

```
./todo add <task description> - Add a new task
```

Specification states:

- Use a simple text format with checkboxes: `[ ]` for incomplete, `[x]` for complete

Useful hints:

- `$*` will give you all the parameters passed into the script as a string
- `echo` and `>>` is useful here to add a message to the `$TODO_FILE`

```
$ ./todo.sh add "Buy groceries"
```

```
Added: Buy groceries
```

## Show TODOs

When TODO is run with no parameters, it should show all the TODOs

```
$ ./todo.sh
  1  Buy groceries
  2  Finish homework
  3  Call dentist
```

### Useful tips

- We will need another function for this!
- \*) [code] ;; can be used as a wildcard in a case statement
- cat -n will add line numbers to the output
- Sed substitution can replace [ ] and [x] with the and
- Be sure to escape the brackets in your substitution commands using the backslash

# Complete TODO

```
./todo.sh done <task_number> - Mark task as complete
```

```
$ ./todo.sh done 1
```

```
Completed task #1
```

## Useful tips

- Sed is useful here again, with the `-i` flag
- Addressing in sed is useful here!
- If you are on macOS, you may need to add `""` after `-i` and before your sed script

```
sed -i "" "something here" "$RANDOM_FILE"
```

# Remove TODO

`./todo.sh rm <task_number>` - Remove a specific task

```
$ ./todo.sh rm 3
```

```
Removed task #3
```

## Useful tips

- Sed is once again useful here! But maybe a different command within sed...
- You can use the provided line number as an address

# Cleanup Completed TODOs

```
./todo.sh clean - Remove all completed tasks
```

```
$ ./todo.sh clean
```

```
Cleaned up 1 completed tasks
```

## Useful Tips

- Grep is useful here
- A convenient way to do this may be to move all the incomplete tasks into a temporary file, and replace the original file with that temporary one. Other ways work too!