

Ertugrul Kasikci 200104004097 CSE344HW2

make command compiles the program. After that ./hw2 command is used to run the program.

Program Asks an input from the user. Appropriate usage can be like ;

ls | grep hw

Program recognizes the commands and pipe symbol and implements them correctly.

To be able to recognize all the commands, I parsed every word in the input which is taken by fgets function. When parsing, strtok function looks for | symbol to parse the words;

```
char *token = strtok(input, "|");
```

For every command I created new child process using fork() function. The returned id value of a fork() function is 0 for newly created child process.

```
// child process  
if (pid1 == 0){
```

By using this information I created execl function in the child processes.

Then I used the command in the input in execl function. After executing the command, the child processes are terminated due to the execl function.

```
execl("/bin/sh", "sh", "-c", commands[j], NULL);
```

For every child process there is a function which creates a log file with a name corresponding that timestamp. In this file command used in this child process is written.

```
// Creates log files for child processes  
void createLogFile(char* command){  
    time_t current_time = time(NULL);  
    char file_name[50];  
    sprintf(file_name, "%ld", current_time);  
    FILE* log_file = fopen(file_name, "w");  
    fprintf(log_file, "Command: %s\n", command);  
    fclose(log_file);  
}
```

Whenever “:q” command occurs, program terminates itself using exit function. Here there is an example;

```
• (base) ertugrul@ertugrul-VirtualBox:~/hw/hw2$ ./hw2
Enter a string: ls | grep hw | :q
hw2
hw2.c
○ (base) ertugrul@ertugrul-VirtualBox:~/hw/hw2$
```