Comp 304- Project I Report

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# **Note:** For all file creations we located them in “../Home/Eda”or “../Home/ilayda”. While executing, file locations should be changed. Part I:

For part I a new method shouldrunmethod(int shouldrun, char \*args[], int background ) is written for fork and to execute child process commands.Supporting background execution of programs is handled in parseCommand method.

# Part II:

In this part of the project, I/O redirection for our shell is implemented . To represent ‘>’ and ‘>>’ redirect1 and redirect2 integers are used. In second part, script command is implemented that records the terminal session into the output file.

# Part III:

As a new shell command “at” method is implemented. It takes an instruction such as creating a file,redirection and executes it at the entered time.

# Part IV:

First,program takes a word as an input. Then,it fork n processes where n is the number of characters in the input word. Once the processes are created,the pid of the process are kept in pids[] and sorted for the input to be passed from the first process to the second and so one with descending order of pids of processes. Additionally, 10 char buffer is created to place the data that will be received from the queue by processes.a message queue with mq\_open is created and memory is allocated for the structure and then pass the queue descriptor and the structure pointer to mq\_getattr that fills the structure with relevant data. To send messages existing queue is opened again but the not created as new. Mq\_send is used to send data,1 represents the priority of the message being sent. Then with a loop data is received from queue and modified by process with 0.5 probability, it is sent back to queue to be received by next process. If it is the last process then data is printed. Unfortunately we couldn’t make this part work.