Report

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☐ SHELL is a program which provides the interface between the user and an operating system. When the user logs in OS starts a shell for user. Kernel controls all essential computer operations, and provides the restriction to hardware access, coordinates all executing utilities, and manages Resources between process. Using kernel only user can access utilities provided by operating system.

☐ In this assignment we learn lot of new things about operating system and how shell make using some of important system calls like `execvp()` , `fork()` , `wait()`, `exit()` .

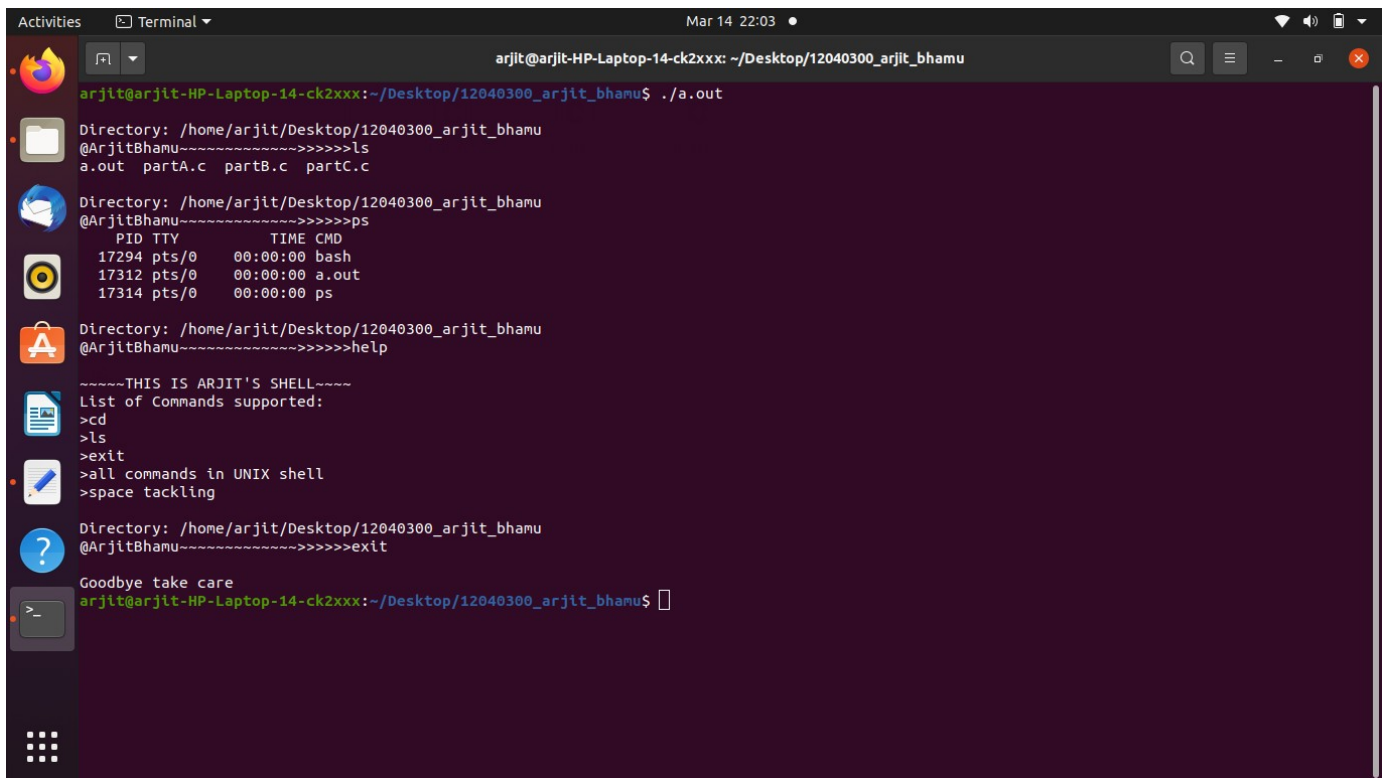☐ Their are three parts of assignment as following:

- **Part A :**
  In this part all commands in UNIX shell, help, cd, exit,hello command works without pipe and &&. First I take Input into string from `Input()` function then I check this input string is any excecutable command or not with the help of `checking_string()` this fuction by removing extra space from the input string by `Space_tackle()` function.
  Then after excecute if it is executable command with the help of this `Execution_()` function.
  Their is also made mycommand defined like help, hello, exit.

Demo of partA
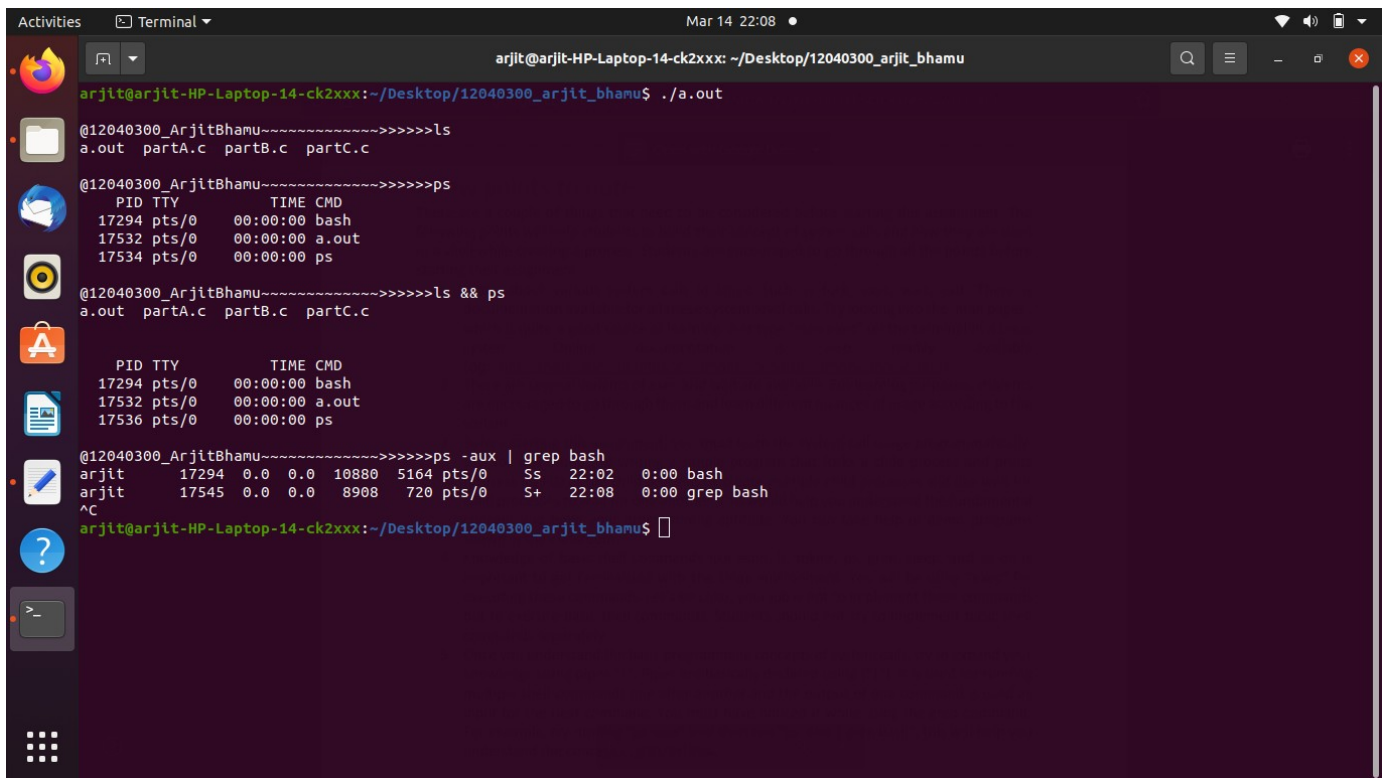
fig1. This screen shot is of partA.

- **Part B :**
  In this part we extend part A with the addition of pipe `|` and `&&` .
  what I do I separate the input string with | and "&&" with the help of these two defined functions
  `separation_and()` & `p_pipe()` and store into arrays and execute LHS and RHS separately.
  At we execute commands store in arrays in function `epipe()` for pipe.

Demo of part B

fig2. This screen shot is of part B.

- **Part C :**
  This part is extended part A and part B with the addition of redirect command `>` .
  In part B we only add one additional fuction `execredir()` for redirect command.

Demo of part C

fig3. This screen shot is of part C.

Some reference : GfG help to give initial idea.