**Assignment#1**

Plagiarism and the use of any AI tool are prohibited. Failure to comply with this policy will result in a grade of 0 on the assignment. Suspected or randomly selected students may be called for a VIVA.

**Problem Statement**

Write a C program for UNIX to implement your own shell that resembles BASH. (5 x 4 Marks)

1. The shell should be capable of running programs in both the foreground and background.

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| Example |
| > ./a.out  > ./a.out & |

1. The shell should support input and output redirection.

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| Example |
| > ls > output.txt  > ls -l / > output.txt  >sort < input.txt > output.txt |

1. The shell should support piping between processes.

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| Example |
| > ls | sort -R | grep “bin” |

1. The shell should support combination of piping between processes and redirections.

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| Example |
| > sort -R <input.txt | grep “bin” > output.txt |