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| **Lab No** | 12b | **Reg. No** | 224921 |
| **Student Name** | Muhammad Saad Tariq | **Section** | A |

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| Solution Task 1 |
| Code:  #include <stdio.h>  #include <stdlib.h>  #include <fcntl.h>  #include <string.h>  int main(int argc, char\* argv[]){  char buff[1];  if(argc != 3){  printf("Incorrect number of arguments\nUsage: ./mytail -n <filename>\n");  exit(0);  }  int char\_count = abs(atoi(argv[1]));  printf("Number of characters to read from the end: %d\n", char\_count);  printf("File to read: %s\n", argv[2]);  int file\_desc = open(argv[2], O\_RDONLY);  if(file\_desc < 0){  printf("File does not exist!\n");  exit(1);  }  int i = 0, line\_count = 0;  while(read(file\_desc, buff, 1)){  if(buff[0] == '\n')  line\_count++;  }  printf("Total no. of lines in the file: %d\n", line\_count);  if(line\_count < char\_count){  printf("Line count less than argument value of n\n");  exit(2);  }  close(file\_desc);  file\_desc = open(argv[2], O\_RDONLY);  printf("The last %d lines:\n", char\_count);  //char result[1];  int new\_count = 0, index = 0;  while(read(file\_desc, buff, 1)){  if(buff[0] == '\n'){  new\_count++;  }  if(new\_count >= (line\_count - char\_count)){  printf("%c", buff[0]);  }  }  close(file\_desc);  return 0;  }  Output:      Error check: |

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| Solution Task 2 |
| Inode of file1.txt before hard link:    After hard link:   * Same inode number * Same contents of both files       After content change in file2.txt:   * Content of file1.txt also changes.     After deleting file1.txt (rm file1.txt)   * file2.txt still exists.     Strace rm file2.txt:   * System call used: unlinkat()       Soft links:   * Unique inode numbers.       Altering contents of file4.txt:   * Contents of file3.txt automatically changed.     After deleting file3.txt:   * file4.txt is a read only file. (cannot edit and save) |