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| **Task 1** | **Output redirection [UBUNTU/LINUX VERSION]** |
|  | **Description:**  Redirect output from various commands to given files. This can be done by overwriting or appending to the contents of the file.  In all of these commands if the file does not exist a new file is created [There by removing the need for touch command].  All data redirection in linux can be achieved by using > , >> and cat commands. |
|  | **Commands:**  **Example 1:**  [navin@navin-omenlaptop15en0xxx ~]$ screenfetch > test.txt  [navin@navin-omenlaptop15en0xxx ~]$ cat test.txt  **Example 2:**  [navin@navin-omenlaptop15en0xxx ~]$ echo "initial" > test2.txt  [navin@navin-omenlaptop15en0xxx ~]$ echo "this is the appended part" >> test2.txt  [navin@navin-omenlaptop15en0xxx ~]$ cat test2.txt  initial  this is the appended part  **Example 3:**  [navin@navin-omenlaptop15en0xxx ~]$ cat > test3.txt  about to be overwritten file  **[CNTRL+D]**  [navin@navin-omenlaptop15en0xxx ~]$ cat > test3.txt  this is file that will remain after overwriting  **[CNTRL+D]**  [navin@navin-omenlaptop15en0xxx ~]$ cat test3.txt  this is file that will remain after overwriting |
|  | **Output Screenshot:**  **C:\Users\Navin Shrinivas\AppData\Local\Microsoft\Windows\INetCache\Content.Word\1.3.png**  **C:\Users\Navin Shrinivas\AppData\Local\Microsoft\Windows\INetCache\Content.Word\1.2.png** |
| **Task 2** | **Input redirection [UBUNTU/LINUX VERSION]** |
|  | **Description:**  Redirect contents of a file to a command using “<”. Contents of the file can be fed into commands such as “wc”,”sort” and char devices such as null. |
|  | **Commands:**  **Example 1:**  [navin@navin-omenlaptop15en0xxx ~]$ man wc  [navin@navin-omenlaptop15en0xxx ~]$ echo "this is being written to the file" > text1.txt  [navin@navin-omenlaptop15en0xxx ~]$ wc --char < text1.txt  34  **Example 2:**  [navin@navin-omenlaptop15en0xxx ~]$ cat > text1.txt  one  two  three  four  five  **[CNTRL+D]**  [navin@navin-omenlaptop15en0xxx ~]$ sort < text1.txt  five  four  one  three  two |
|  | **Output Screenshot:** |
| **Task 3** | **Discard the output [UBUNUT/LINUX VERSION]** |
|  | **Description:**  Here we use a char device called ”null”, all char devices are present in “/dev/” directory. Any input given to null device is lost forever. |
|  | **Commands:**  [navin@navin-omenlaptop15en0xxx ~]$ man man > /dev/null  [navin@navin-omenlaptop15en0xxx ~]$ |
|  | **Output Screenshot:** |
| **Task 4** | **Error Redirection using ‘2>’ [UBUNUT/LINUX VERSION]** |
|  | **Description:**  Errors arising from program out of the g++ compiler can be stored in a file by using the ‘2>’ operators. |
|  | **Commands:**  [navin@navin-omenlaptop15en0xxx ~]$ cat > test.c  #include<stdio.h>  int main()  {  printf("hello world!");  printf("%i",2/0);  }  [CNTRL+D]  [navin@navin-omenlaptop15en0xxx ~]$ g++ test.c 2> error.txt  [navin@navin-omenlaptop15en0xxx ~]$ cat error.txt  test.c: In function ‘int main()’:  test.c:5:15: warning: division by zero [-Wdiv-by-zero]  5 | printf("%i",2/0);  | ~^~ |
|  | **Output Screenshot:** |
| **Task 5** | **Redirect all outputs : Write multiple outputs to one file [UBUNUT/LINUX VERSION]** |
|  | **Description:**  Redirecting multiple outputs of files or commands to a single file. |
|  | **Commands:**  [navin@navin-omenlaptop15en0xxx ~]$ { cat error.txt ; cat test.c ;} >text1.txt  [navin@navin-omenlaptop15en0xxx ~]$ cat text1.txt  test.c: In function ‘int main()’:  test.c:5:15: warning: division by zero [-Wdiv-by-zero]  5 | printf("%i",2/0);  | ~^~  #include<stdio.h>  int main()  {  printf("hello world!");  printf("%i",2/0);  } |
|  | **Output Screenshot:** |
| **Task 6:** | **Options in gcc compiler** |
|  | **Description:**  All commands come with a set of options.We expalore few of those options for gcc compiler in this task. |
|  | **Commands:**  Example 1:  [navin@navin-omenlaptop15en0xxx ~]$ g++ -E test.c > text1.txt  [navin@navin-omenlaptop15en0xxx ~]$ more text1.txt  Example 2:  [navin@navin-omenlaptop15en0xxx ~]$ g++ -c test.c  [navin@navin-omenlaptop15en0xxx ~]$ ls | grep a.\* //a.exe should not be present  Example 3:  [navin@navin-omenlaptop15en0xxx ~]$ g++ test.c -o test |
|  | **Output Screenshot:** |