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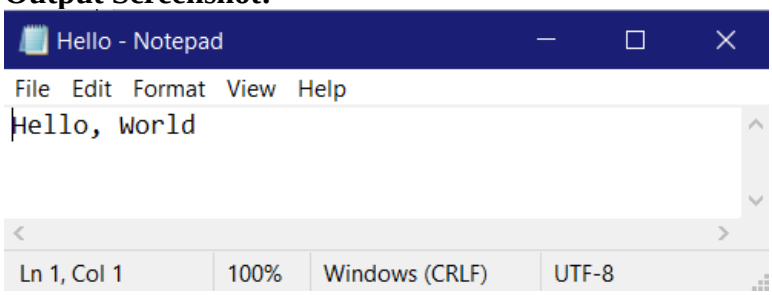
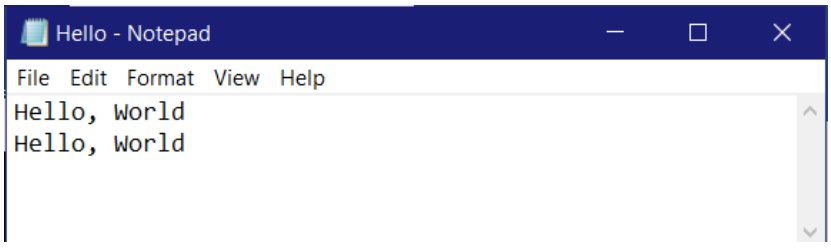
Task 1	Redirect Standard Output: Write to New File
	Description: This command redirects the output of a program from cmd to a file, but it overwrites the content of the file thus erasing the existing content of the file.

	Commands:
	`C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1>gcc helloWorld.c`
	
	`C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1>a`
	`Hello, World`
	`C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1>a>Hello.txt`
	
	`C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1>Hello.txt`
	
	`C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1>`
	
	Program:
	W1 > C helloWorld.c > ...
	`#include<stdio.h>`
	
	`int main()`
	`{`
	`  printf("Hello, World \n");`
	`  return 0;`
	`}`

	Output Screenshot: 

Task 2	**Redirect Standard Output: Writes to the Same File**
	Description: This command redirects the output of a program from cmd to a file; Does not overwrite the existing content of the file.

	Commands:
	`C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1>gcc helloWorld.c`
	
	`C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1>a`
	`Hello, World`
	
	`C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1>a>>hello.txt`
	
	`C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1>hello.txt`
	
	Program:
	W1 > helloWorld.c > ...
	`#include<stdio.h>`
	
	`int main()`
	`{`
	`  printf("Hello, World \n");`
	`  return 0;`
	`}`

	Output Screenshot: 

Task 3	**Redirect Standard Error To a File**
	Description: This command redirects only the errors of the program to a file if they exist, otherwise nothing is redirected. File descriptor number '2' represents standard error. Here only FILE NOT FOUND error is displayed and the rest of the output is not seen in the file.

	Commands:
	`C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1>gcc helloWorld.c`
	`helloWorld.c: In function 'main':`
	`helloWorld.c:5:30: error: expected ';' before 'return'`
	`printf("Hello, World \n")`
	`^`
	`;`
	`return 0;`
	`~~~~~~`
	`C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1>gcc helloWorld.c 2>err.txt`
	`C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1>err.txt`
	
	Program:
	W1 > helloWorld.c > main()
	`#include<stdio.h>`
	
	`int main()`
	`{`
	`printf("Hello, World \n")`
	`return 0;`
	`}`

	Output Screenshot:
	err - Notepad
	File Edit Format View Help
	`helloWorld.c: In function 'main':`
	`helloWorld.c:5:30: error: expected ';' before 'return'`
	`printf("Hello, World \n")`
	`^`
	`;`
	`return 0;`
	`~~~~~~`

Task 4	**Redirect All Output: Writes to the Same File**
	Description: This command redirects the complete output along with the errors of the program to a file .

	Commands:
	`C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1>gcc helloWorld.c`
	`helloWorld.c: In function 'main':`
	`helloWorld.c:5:30: error: expected ';' before 'return'`
	`printf("Hello, World \n")`
	`^`
	`;`
	`return 0;`
	`~~~~~~`
	`C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1>gcc helloWorld.c>hello.txt 2>err.txt`
	`C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1>err.txt`
	
	Program:
	W1 > C helloWorld.c > main()
	1 #include<stdio.h>
	2
	3 int main()
	4 {
	5 printf("Hello, World \n")
	6 return 0;
	7 }

	Output Screenshot:
	err - Notepad
	File Edit Format View Help
	`helloWorld.c: In function 'main':`
	`helloWorld.c:5:30: error: expected ';' before 'return'`
	`printf("Hello, World \n")`
	`^`
	`;`
	`return 0;`
	`~~~~~~`

Task 5	**Input Redirection-Taking input from file**
	Description: This command takes the input from the file and then sorts it and prints the output in the terminal.

	Commands:
	`C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1>sort<text.txt`
	`C++`
	`CSS`
	`HTML`
	`Java`
	`Javascript`
	`Python`
	
	Original file:
	text - Notepad
	File Edit Format View Help
	Java
	C++
	Python
	Javascript
	HTML
	CSS

Task 6:	**Options in gcc compiler**
	Description: Using the gcc compiler options: -o =>to compile the program and to place the output to a file -E =>only does the preprocessing and displays the output of preprocessing, but not compile, assemble or link -c =>compile and assemble and produce the compiles code without linking S =>compile only, but not assemble or link -Wall =>This option enables all the warnings in gcc.
	Commands: 1. gcc -E test.c 2. gcc test.c -o test 3. gcc -c test.c 4. gcc -S test.c 5. gcc -Wall test.c Program: W1 > C test.c > main() 1 #include<stdio.h> 2 3 int main() 4 { 5 int i; 6 printf("gcc command %d \n",i); 7 return 0; 8 }

Output Screenshot:

1)

```
# 1 "test.c"
# 1 "<built-in>"
# 1 "<command-line>"
# 1 "test.c"
# 1 "c:\\mingw\\include\\stdio.h" 1 3
# 38 "c:\\mingw\\include\\stdio.h" 3

# 39 "c:\\mingw\\include\\stdio.h" 3
# 56 "c:\\mingw\\include\\stdio.h" 3
# 1 "c:\\mingw\\include\\_mingw.h" 1 3
# 55 "c:\\mingw\\include\\_mingw.h" 3

# 56 "c:\\mingw\\include\\_mingw.h" 3
# 66 "c:\\mingw\\include\\_mingw.h" 3
# 1 "c:\\mingw\\include\\msvcrtver.h" 1 3
# 35 "c:\\mingw\\include\\msvcrtver.h" 3

# 36 "c:\\mingw\\include\\msvcrtver.h" 3
# 67 "c:\\mingw\\include\\_mingw.h" 2 3
```

2)

```
C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1>gcc test.c -o output

C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1>dir
 Volume in drive C is OS
 Volume Serial Number is 2040-008E

 Directory of C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1

14/05/2021  18:27    <DIR>          .
14/05/2021  18:27    <DIR>          ..
14/05/2021  17:58            54,022 a.exe
14/05/2021  18:07               231 err.txt
14/05/2021  18:07                 0 Hello.txt
14/05/2021  18:15                90 helloWorld.c
14/05/2021  18:27            54,024 output.exe
14/05/2021  18:23               100 test.c
14/05/2021  18:14                40 text.txt
               7 File(s)        108,507 bytes
               2 Dir(s)  204,739,792,896 bytes free
```

3)

```
C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1>gcc -c test.c

C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1>dir
 Volume in drive C is OS
 Volume Serial Number is 2040-008E

 Directory of C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1

14/05/2021  18:31    <DIR>          .
14/05/2021  18:31    <DIR>          ..
14/05/2021  17:58            54,022 a.exe
14/05/2021  18:07               231 err.txt
14/05/2021  18:07                 0 Hello.txt
14/05/2021  18:15                90 helloWorld.c
14/05/2021  18:27            54,024 output.exe
14/05/2021  18:23               100 test.c
14/05/2021  18:31               914 test.o
14/05/2021  18:14                40 text.txt
               8 File(s)        109,421 bytes
               2 Dir(s)  204,442,501,120 bytes free
```

4)

```
C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1>gcc -S test.c

C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1>dir
 Volume in drive C is OS
 Volume Serial Number is 2040-008E

 Directory of C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1

14/05/2021  18:32    <DIR>          .
14/05/2021  18:32    <DIR>          ..
14/05/2021  17:58            54,022 a.exe
14/05/2021  18:07               231 err.txt
14/05/2021  18:07                 0 Hello.txt
14/05/2021  18:15                90 helloWorld.c
14/05/2021  18:27            54,024 output.exe
14/05/2021  18:23               100 test.c
14/05/2021  18:31               914 test.o
14/05/2021  18:32               615 test.s
14/05/2021  18:14                40 text.txt
               9 File(s)        110,036 bytes
               2 Dir(s)  204,442,152,960 bytes free
```

	5)
	`C:\Users\Renita Kurian\Documents\Academic\Second Semester\C Lab\W1>gcc -Wall test.c`
	`test.c: In function 'main':`
	`test.c:6:5: warning: 'i' is used uninitialized in this function [-Wuninitialized]`
	`  printf("gcc command %d \n",i);`
	`  ^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~`