

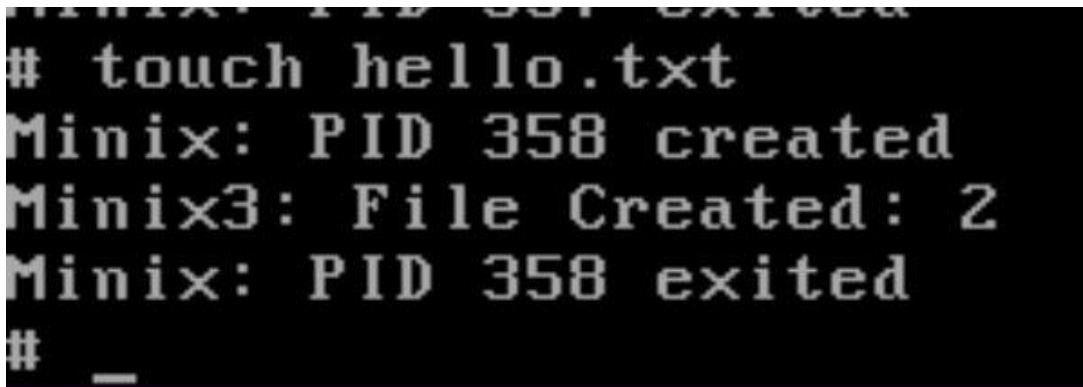
CS 304 Operating Systems Lab

Assignment 10

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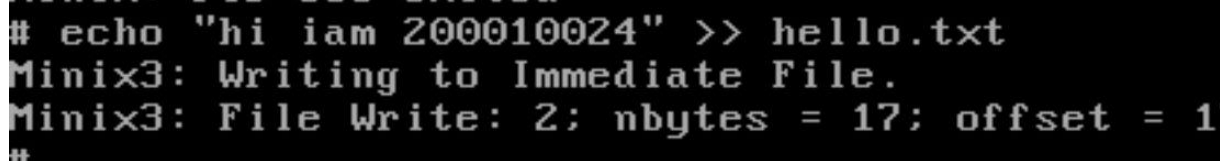
We need to implement immediate files in minix for files with size less than 32 bytes. We have changed a couple of files in the source code of minix code and implemented this.

In immediate files we store the files inside the inode itself instead of inside the data block. So the setup.sh replaces the files and builds the source folder. Below are some screenshots of the following.

A terminal window with a black background and white text. The text shows a sequence of commands and system responses: a prompt followed by '# touch hello.txt', then 'Minix: PID 358 created', then 'Minix3: File Created: 2', then 'Minix: PID 358 exited', and finally a prompt followed by '# _'.

```
# touch hello.txt
Minix: PID 358 created
Minix3: File Created: 2
Minix: PID 358 exited
# _
```

Fig. 1 Creating a File

A terminal window with a black background and white text. The text shows a sequence of commands and system responses: a prompt followed by '# echo "hi iam 200010024" >> hello.txt', then 'Minix3: Writing to Immediate File.', then 'Minix3: File Write: 2; nbytes = 17; offset = 1', and finally a prompt followed by '#'.

```
# echo "hi iam 200010024" >> hello.txt
Minix3: Writing to Immediate File.
Minix3: File Write: 2; nbytes = 17; offset = 1
#
```

Fig. 2 Writing to a File (Less than 32 bytes)

```
Minix3: Writing to Immediate File.  
Minix3: File Write: 2; nbytes = 17; offset = 17  
# echo "This assignment we are doing in teams" >> hello.txt  
Minix3: File Write: 2; nbytes = 38; offset = 55  
#
```

Fig. 3 Writing to File (More than 32 bytes)

```
# cat hello.txt  
Minix: PID 359 created  
Minix3: File Read: 2; nbytes = 4096; offset = 55  
hi iam 200010024  
This assignment we are doing in teams  
Minix3: File Read: 2; nbytes = 4096; offset = 55  
Minix: PID 359 exited  
#
```

Fig. 4 Reading a File (More than 32 bytes)

```
# cat another.txt  
Minix: PID 363 created  
Minix3: Reading from Immediate File.  
Minix3: File Contentsof Immediate File:  
minix lab-10  
Minix3: EOF - Immediate File  
Minix3: File Read: 3; nbytes = 4096; offset = 0  
Minix: PID 363 exited
```

Fig. 5 Reading a File (Less than 32 bytes)

```
# rm hello.txt  
Minix: PID 364 created  
Minix: PID 364 exited  
#
```

Fig. 6 Deleting a File