File System Data Structures

Due Nov 19, 2019 at 11:59pm   **Points** 12   **Questions** 7
Time Limit None   **Allowed Attempts** Unlimited

This quiz is no longer available as the course has been concluded.

Attempt History

	Attempt	**Time**	**Score**
LATEST	**Attempt 1**	13 minutes	12 out of 12

Score for this attempt: **12** out of 12
Submitted Nov 18, 2019 at 8:43pm
This attempt took 13 minutes.

Question 1	**2 / 2 pts**

Assume the initial state of the file system is:

inode bitmap 10000000
inodes [d a:0 r:2] [] [] [] [] [] [] []
data bitmap 10000000
data [(.,0) (..,0)] [] [] [] [] [] [] []

If the file system transitions to:

inode bitmap 11000000
inodes [d a:0 r:3] [d a:1 r:2] [] [] [] [] [] []
data bitmap 11000000
data [(.,0) (..,0) (t,1)] [(.,1) (..,0)] [] [] [] [] [] []

What operation must have been performed?

○ create("/t");

○ fd=open("/t"); write(fd);

    ○ link("/t", "/");

Correct!

    ◉ mkdir("/t");

Question 2   **2 / 2 pts**

What operation must be performed next for the file system to transition to:

inode bitmap 11100000
inodes [d a:0 r:4] [d a:1 r:2] [f a:-1 r:1] [] [] [] [] []
data bitmap 11000000
data [(.,0) (..,0) (t,1) (y,2)] [(.,1) (..,0)] [] [] [] [] [] []

    ○ mkdir("/y");

Correct!

    ◉ create("/y");

    ○ mkdir("/t/y");

    ○ create("/t/y");

Question 3   **2 / 2 pts**

What operation must be performed next for the file system to transition to:

inode bitmap 11100000
inodes [d a:0 r:4] [d a:1 r:3] [f a:-1 r:2] [] [] [] [] []
data bitmap 11000000
data [(.,0) (..,0) (t,1) (y,2)] [(.,1) (..,0) (c,2)] [] [] [] [] [] []

    ○ mkdir("/t/c");

○ create("/t/c");

Correct!

◉ link("/y", "/t/c");

○ link("/y", "/c");

○ create("/c");

Question 4

2 / 2 pts

What operation must be performed next for the file system to transition to:

inode bitmap 11100000
inodes [d a:0 r:4] [d a:1 r:3] [f a:2 r:2] [] [] [] [] []
data bitmap 11100000
data [(.,0) (..,0) (t,1) (y,2)] [(.,1) (..,0) (c,2)] [o] [] [] [] [] []

Correct!

◉ fd=open("/t/c"); write(fd);

○ fd=open("/t/y"); write(fd);

○ link("/t", "/t/c");

○ create("/t/c");

○ mkdir("/t/c");

Question 5

1 / 1 pts

What operation must be performed next for the file system to transition to:

inode bitmap 11110000
inodes [d a:0 r:5] [d a:1 r:3] [f a:2 r:2] [d a:3 r:2] [] [] [] []
data bitmap 11110000
data [(.,0) (..,0) (t,1) (y,2) (v,3)] [(.,1) (..,0) (c,2)] [o] [(.,3) (..,0)] [] [] [] []

○ create("/v");

○ link("/", "/v");

○ fd=open("/y"); write(fd);

Correct!

◉ mkdir("/v");

Question 6   1 / 1 pts

What operation must be performed next for the file system to transition to:

inode bitmap 11111000
inodes [d a:0 r:6] [d a:1 r:3] [f a:2 r:2] [d a:3 r:2] [d a:4 r:2] [] [] []
data bitmap 11111000
data [(.,0) (..,0) (t,1) (y,2) (v,3) (j,4)] [(.,1) (..,0) (c,2)] [o] [(.,3) (..,0)] [(.,4) (..,0)] [] [] []

○ mkdir("/t/j");

Correct!

◉ mkdir("/j");

○ create("/j");

○ create("/t/j");

Question 7   2 / 2 pts

What operation must be performed next for the file system to transition to:

inode bitmap 11111000
inodes [d a:0 r:6] [d a:1 r:2] [f a:2 r:1] [d a:3 r:2] [d a:4 r:2] [] [] []
data bitmap 11111000
data [(.,0) (..,0) (t,1) (y,2) (v,3) (j,4)] [(.,1) (..,0)] [o] [(.,3) (..,0)] [(.,4) (..,0)] [] [] []

○ mkdir("/t");

○ create("/t/c");

○ unlink("/t");

Correct!

◉ unlink("/t/c");

Quiz Score: **12** out of 12