**Operating System**

**Simulation based Project**

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This code simulates a simple file management system on a disk consisting of 1024 blocks. The disk is represented by a list called "disk", where each element in the list represents a block on the disk. The value of each element can be either None, meaning that the block is free, or a string, representing the name of the file stored in that block.

The code defines five functions:

1. "add\_file(name, size)": This function adds a file to the disk with the given name and size. It searches the disk for a contiguous block of free blocks that is big enough to store the file, and then stores the file in those blocks. If such a block is found, the function returns True. Otherwise, it returns False.
2. "delete\_file(name)": This function removes a file from the disk with the given name. It searches the disk for all blocks containing the file with that name and sets their values to None. If at least one block containing the file is found, the function returns True. Otherwise, it returns False.
3. "calculate\_fragmentation()": This function calculates the number of fragmented blocks on the disk, meaning the number of free blocks that are not contiguous with any other free blocks.

The code also includes a main program loop that displays a menu of options to the user and accepts user input to perform the desired file management operations. The menu includes the following options:

1. Creating a File: Prompts the user to enter a file name and size, and then attempts to add the file to the disk.
2. Deleting a File: Prompts the user to enter a file name, and then attempts to delete the file from the disk.
3. Calculate Fragmentation: Displays the number of fragmented blocks on the disk.
4. Stopping the Simulation: Ends the program loop and exits the program.