In FFS file system, increased block size is used (at least 4KB and is power-of-two multiple of 4KB). The file system is disk aware using the cylinder groups in which directories are stored. This decreases the seek latency. Cylinder groups contain superblock, inode bitmap, data bitmap, inodes and data blocks.

When a process requests a creation of a new file, first the file system checks the directory in which the request has been done. It then locates the cylinder group in which that directory is present and finds the free inode if available. If not, it goes for other group having free inode.

The inode bitmap and inode block is updated showing that they are used for the new file. A new directory under the parent directory is created which contains the name of the new file and the corresponding inode. The directory entry is then written to the disk (assuming the size of the block to be 4KB and fragmentation size to be 1KB). The system receives the write system call until the file size reaches 20KB. If the writes occur in 4KB chunks ( a complete block size), the system locates free block in the cylinder group and updates the free block bitmap to used. The inode is changed such that the next free direct block is updated to have the value of the disk block. So, the first 4KB data write would allocate the first direct block, second write would allocate the second block and so on. If the writes occur in other than 4KB increment, 1KB fragments are allocated to the data and if not sufficient, the system copies the data in the fragments left by last write into a new block and starts to append the new data there. These writes are not written immediately into the disk , but rather they are buffered in the block buffer cache and are written to disk in batches when necessary. This saves the overhead and makes it efficient.