1. Each inode is either unallocated or one of the valid types (T\_FILE, T\_DIR, T\_DEV). ERROR: bad inode. done
2. For in-use inodes, each address that is used by inode is valid (points to a valid datablock address within the image). If the direct block is used and is invalid, print ERROR: bad direct address in inode.; if the indirect block is in use and is invalid, print ERROR: bad indirect address in inode.done(have to both check indirect itself and those addresses)
3. Root directory exists, its inode number is 1, and the parent of the root directory is itself. ERROR: root directory does not exist. done
4. Each directory contains . and .. entries, and the . entry points to the directory itself. ERROR: directory not properly formatted. Done
5. For in-use inodes, each address in use is also marked in use in the bitmap. ERROR: address used by inode but marked free in bitmap. done
6. For blocks marked in-use in bitmap, actually is in-use in an inode or indirect block somewhere. ERROR: bitmap marks block in use but it is not in use.????????**scan bit map,**record all inode and indirect blocks in a map then scan the map to
7. For in-use inodes, direct address in use is only used once. ERROR: direct address used more than once.done
8. For in-use inodes, indirect address in use is only used once. ERROR: indirect address used more than once. Done
9. For all inodes marked in use, must be referred to in at least one directory. ERROR: inode marked use but not found in a directory.repair.scan directory,read their inodenumber,maybe most difficult one.Done type!=0即可
10. For each inode number that is referred to in a valid directory, it is actually marked in use. ERROR: inode referred to in directory but marked free.????????????????just means it is a type,err directory??no need to scan the directory and check its i
11. Reference counts (number of links) for regular files match the number of times file is referred to in directories (i.e., hard links work correctly). ERROR: bad reference count for file.////done
12. No extra links allowed for directories (each directory only appears in one other directory). ERROR: directory appears more than once in file system.

*Notice root directory shouldn’t be included.*

*Only consider child directory*

.==1，..=2；

9—10是对，反过来检查

How to scan through each bit map, only just mark the data block as used.

~cs537-1/ta/tests/5a/runtests