The System Error

You've probably already had the unpleasant experience of a bomb, system error, or crash. What a bomb means is that basically a serious error has occured in a program or INIT that was running at the time and the conflict could not be resolved.   Unless you have a debugger (such as Apple's MacsBug) installed, or know how to use the built in debugger, these errors are usually so serious that you have to restart your machine.   Quick note here, if it's a crash or bomb and you have to reboot the machine without a normal shut down use the reset button if you have a RAM disk in use under System 7.   A restart or using the reset button on the programmers switch will not result in the loss of information on the RAM disk. As long as power is being supplied to memory the RAM disk will still be present.   Under no circumstances should you turn the computer off if you have a RAM disk installed!   You will definitly lose everything on it if you do.

What Causes a Bomb?

If the program(s) your running are frequently bombing there are generally six possible causes:

1)
The program you are running has a bug in it.   This means that some programmer somewhere has messed up and it's causing you problems.   Usually there isn't much you can do directly except to call tech support and see if there is an upgrade that solves your poblem.   Sometimes there is what's called a work-around, i.e.- another way to get the same task accomplished without that bomb dialog box showing up.

2)
The directory has become corrupted.   This means that the information that tells your computer where things are and whats happening is at least partly wrong and getting the computer very confused.   A lot of times this can be easily solved by Apple's Disk First Aid (always use the newest version if possible) or other third party disk repair and recovery tools such as Norton Utilities.   If these detect a problem that cannot be fixed your only option is to recover what you can to a safe source and reformat the hard drive.

3)
There is an INIT conflict.   An INIT (or sometimes called extensions) is one of those little pictures that appear on your screen when you first boot your Macintosh.   An INIT works by altering the system code in RAM.   Sometimes these INITs have little fights in RAM trying to decide who should get to do what resulting in a bomb.   To see if it is an INIT conflict:

Under System 6.x, take all of the INITs out of the system folder and reboot.   If   everything is working fine then it is most likely an INIT conflict.   You now have to figure out which one it is.   Make a new folder on your desktop labled "INITs" and copy all of them into that folder. Now take the first half and put them back into the system folder and reboot.   If your machine is all happy you know the bad INIT has to be in the "INITs" folder on your desktop, you can then continue on and try to narrow it down.   Once you find it you can try to rename it so that it loads before or after the conflict INIT, sometimes this works, sometimes it doesn't.

Under System 7.x, to see if a bad extension (same thing as an INIT) is your problem, reboot and hold down the shift key, under the "Welcome to Macintosh" dialog you will see "Extensions Off" or something.   Then, if your Mac works fine, follow the same instructions under the System 6 section to find the bad Extension (located in the Extensions Folder).

4) The System Software has become corrupted.   Almost always, the only way out of this is to reinstall the corrupted part of your system.   Use your backup copy of the System Disks (you do have one, right?) to reinstall whatever is corrupted.

5)   There is some minor corruption of your hardware.   This is usually a bad sector on a floppy or hard disk that is preventing data from being read correctly.   The only way out of this is to recover what data you can from the damaged disk and reformat the disk.   Rarely, bombs can be caused because of RAM that has become loose in its socket or a loose cable causing things to get scrambled.

6) You have a virus.   Now I've done it, I've put people green to virus's into a panic.   Let me just say this, it is VERY rare that you have a virus.   Although the different kinds of virus's attacking the Macintosh have increased, the actual amount of computers infected has gone way down.   I've personally never had a virus (I use Gatekeeper and Disinfectant, two excellent virus protection programs), but have had to eradicate virus's on friends and school's computers.   All you need is the latest version of Disinfectant (As of this writing, 3.4), a freeware program.   It'll scan all your hard disks and/or floppy disks looking for a virus and killing it.   It then try's to make repairs to any damage they (the virus) may have made. All computers should have some form of virus protection on them.   And it may soud stupid to some, but people ask me this all the time: a Macintosh can not   get an IBM compatible virus.   At least, not yet.   And remember, I have not personally seen or heard of anyone that has lost data because of a virus.   I'm sure it happens, but it's very rare.   Keep a current version of Disinfectant on hand and you'll be all set.   See the chapter "Introduction to the Virus"

What other things can I do to prevent another bomb?

• Increase the amount of memory a program uses--many program problems are caused by low memory conditions.   You should increase the memory at least to the "suggested size"; if the memory is already that size, try increasing it by another 512 K (via the Get Info command in the File menu).

• Run MacCheck's tests (a program by Apple that tells you everything you would want to know about your Macintosh, press the "Test" button).   MacCheck's tests check for corrupted directories.   If MacCheck finds a corrupted directory, you will need to run a utility, such as Apple's Disk First Aid, to fix the problem

• Restart your machine holding down the "Shift" key (only that key)--doing this tells your Macintosh to turn off the loading of its INITs

• Contact the program's manufacturer.   You might have an older copy of the program that cannot run with this version of the system software.

• If none of the above suggestions helped fix the problem, contact Apple's Assistance Center.