System Flowcharts

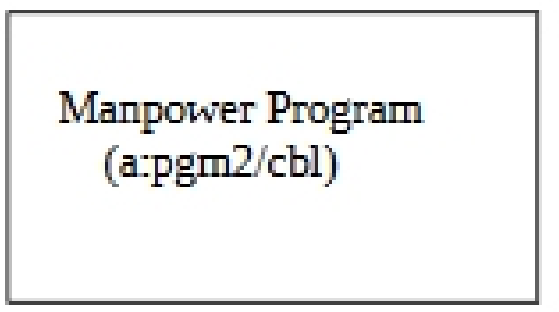
(High-level Overview of your Application)

Modified 12/20/2006

Background

Creation of a system flowchart (not to be confused with a program flow chart) is the first step in creating your software design. The intent of the system flowchart is to give a bird's eye, quick view of your application as a black box - one black box per program.

Each program is to be represented as a black box with the name of the program inside of it. Underneath, you are to include in parentheses the file name of your program. Example:



Only the incoming and outgoing files are shown. Directed arrows from file symbols should be drawn going into the program box and emanating from it. If the input file is a disk file, then inside the symbol for a disk file should appear the logical file name. Underneath, as in the case for the program box above, include the physical file id. Typical entries might include: Old Manpower Master File (a:\mpwr.dat) or Sorted Transaction File (a:\strans.dat), etc.

Reports should be included in a "listing" symbol and should contain the name of the report and the report id, as in: Change List (a:\chgelst.rpt) and/or (NSU8R001). By including both of these in parentheses, this implies that the report is written to disk and later printed. Again, use the "listing" symbol for such files.

Always use the logical file name as used in your program accompanied by the physical file names.

System Flowcharts should proceed "down" the page and not "across" the page of printed output.

***FOR ADVANCED COURSES*: If, as is the case for advanced courses, a file that is ultimately to be printed, is passed from program to program as a disk file, then the disk file symbol should be used. Only when the disk file is completed and is "ready" for printing should the listing symbol be used.**

***FOR ADVANCED COURSES*: COPY files are not required to be shown in a system flowchart.**

***FOR ADVANCED COURSES*: For projects having multiple programs, then the files should "flow" from one program to the other, as appropriate. Specifically, if an output file as produced by one program is input to a following (not necessarily the "next" program), then connecting lines need to be drawn, or, at a minimum, the file needs to be redrawn.**

REMEMBER There is no program logic in a system flowchart. Hence the name, "system."

REMEMBER your system flowchart is the starting place for design. It shows what files are input, output, created, etc. and the file medium (disk file, report file, etc.). It is a high level overview that gives a very initial structure to your preliminary (architectural) design. From this, proceed with your Structure Chart (software architecture) and lastly to your Pseudocode (software procedure).