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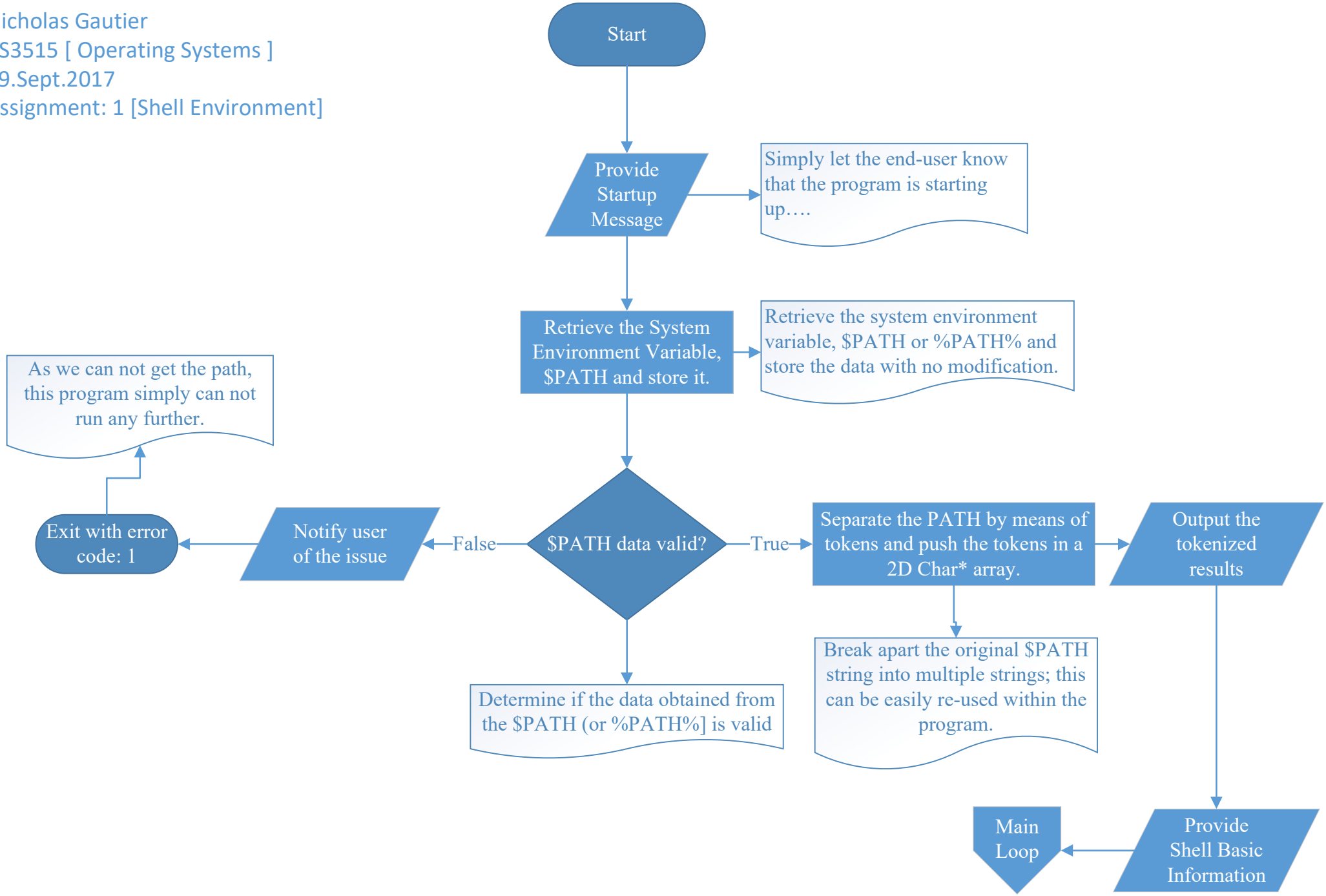
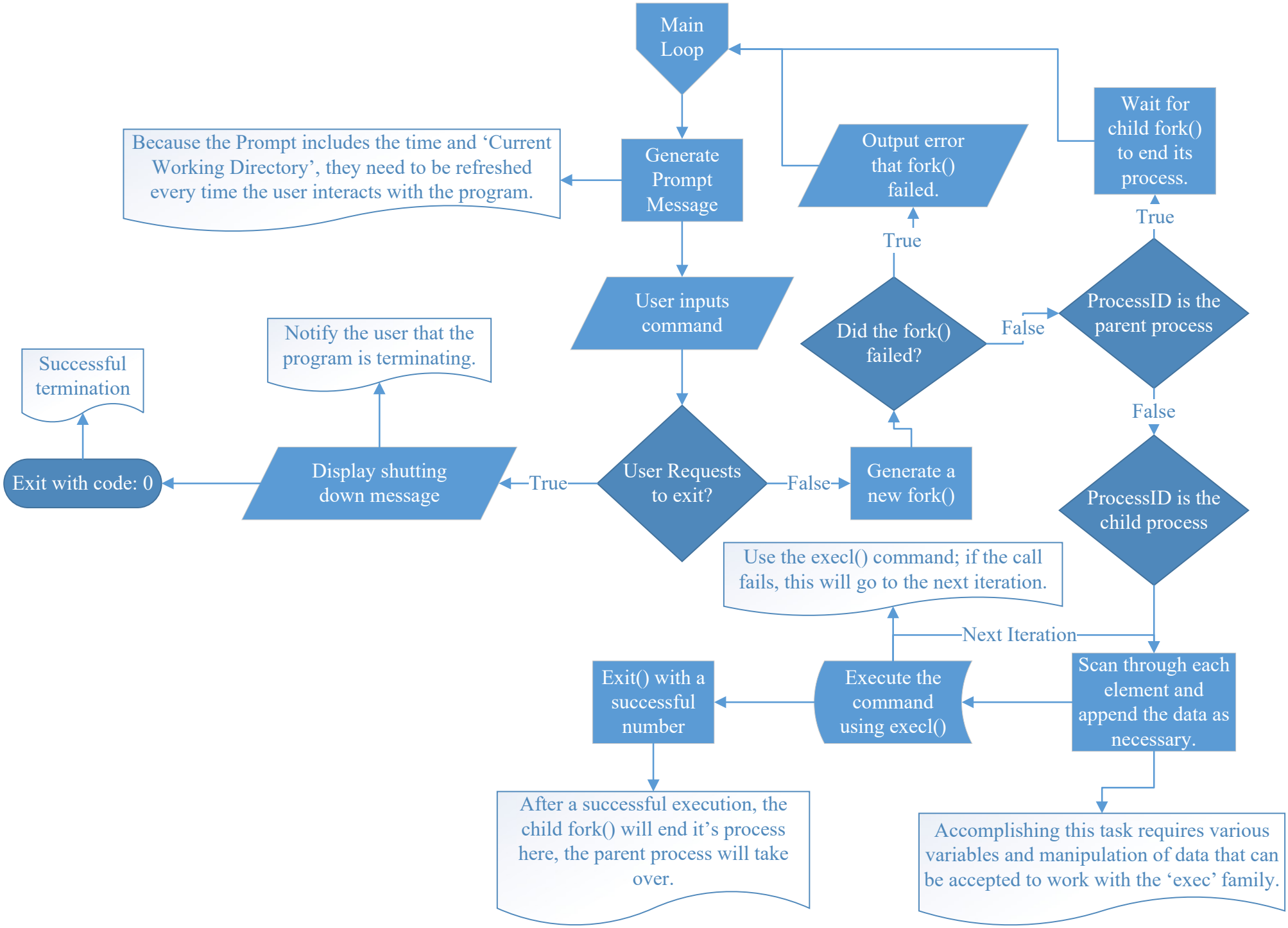
CS3515 [ Operating Systems ]
19.Sept.2017
Assignment: 1 [Shell Environment]




Main Loop
Generate Prompt Message
Because the Prompt includes the time and 'Current Working Directory', they need to be refreshed every time the user interacts with the program.
User inputs command
User Requests to exit?
True
Display shutting down message
Notify the user that the program is terminating.
Exit with code: 0
Successful termination
False
Generate a new fork()
Did the fork() failed?
True
Output error that fork() failed.
False
ProcessID is the parent process
True
Wait for child fork() to end its process.
False
ProcessID is the child process
Scan through each element and append the data as necessary.
Accomplishing this task requires various variables and manipulation of data that can be accepted to work with the 'exec' family.
Execute the command using execl()
Use the execl() command; if the call fails, this will go to the next iteration.
Next Iteration
Exit() with a successful number
After a successful execution, the child fork() will end it's process here, the parent process will take over.