Problem 1 (0 Points)
Familiarize yourself with the sections of The Gnu C Library Reference Manual that pertain to implementing the \texttt{xsh} shell.

Problem 2 (6 Points)
Consider the following three \texttt{xsh} pipelines:

\begin{verbatim}
ls -l /usr/bin | grep Dec | sort -n +4
ls -l /usr/bin | grep Dec | sort -n +4 > xxx
ls -l /usr/bin | grep Dec | sort -n +4 > xxx &
\end{verbatim}

a) Give the pseudo-code required to evaluate the first pipeline in which \texttt{xsh} creates all pipelines and forks all processes in the pipeline. Assume that only external commands are in the pipeline.

b) Explain how the pseudo-code in Part a would need to be modified to support the stdout redirection shown in the second pipeline.

c) What are the most difficult aspects of supporting the backgrounding of a pipeline with stdout redirection like that shown in the third pipeline?

Problem 3
Finish Problem 8 from Homework 3.