```
\paragraph{Example}
The conversion to CSR format of the characteristic matrix \emph{faces-vertices} \texttt{FV} is given below for our simple
example made by four triangle of a manifold 2D space, graphically shown in Figure~\ref{fig:2D-non-manifold}a. The LAR
representation with CSR matrices does not make difference between manifolds and non-manifolds, conversely than most modern
solid modelling representation schemes, as shown by removing from \texttt{FV} the third triangle, giving the model in Figure~
\ref{fig:2D-non-manifold}b.
%-----------------------------------------------------------------------------
@D Test example of Brc to Csr transformation
@{print "\n>>> brc2Csr"
V = [[0, 0], [1, 0], [2, 0], [0, 1], [1, 1], [2, 1]]
FV = [[0, 1, 3], [1, 2, 4], [1, 3, 4], [2, 4, 5]]
EV = [[0,1],[0,3],[1,2],[1,3],[1,4],[2,4],[2,5],[3,4],[4,5]]
csrFV = csrCreate(FV)
csrEV = csrCreate(EV)
print "\ncsrCreate(FV) =\n", csrFV
VIEW(STRUCT(MKPOLS((V,FV))))
VIEW(STRUCT(MKPOLS((V,EV))))
@}
%-----------------------------------------------------------------------------

\begin{figure}[htbp] %  figure placement: here, top, bottom, or page
   \centering
   \includegraphics[height=0.25\linewidth,width=0.25\linewidth]{images/larcc1a}
   \includegraphics[height=0.25\linewidth,width=0.25\linewidth]{images/larcc1b}
   \caption{(a) Simplicial 2-complex; (b) its 1-skeleton.}
   \label{fig:2D-non-manifold}
\end{figure}

\section{Matrix operations}

As we know, the LAR representation of topology is based on CSR representation of sparse binary (and integer) matrices. In
this section we hence discuss the stack of matrix representations and operations implemented by this module.  The current
python prototype makes reference to the scipy implementation of sparse matrices. Later implementations in different languages
will necessarily make reference to different matrix packages.
```