XML is widely used format for storing all kinds of data and XSLT standard represents a standardized way, how to transform a XML document to a di fferent structure. Many XSLT implementation has been introduced, but the most of them uses an in-memory representation of the transformed XML document. The implementation done in this thesis uses the relational database engine to store processed document and takes advantages of SQL to evaluate XPath expressions used by XSLT. First, importing source XML document into the generic relational mapping is described. For processing XPath expressions, the XPath to SQL convertor is introduced. Lastly, the processing of XSLT stylesheets by relational database engine is shown.