**Threats to validity:**

Construct Validity: We have done the association rule mining based on only 4 versions. Association rules might have variations if we would look at more different versions.

Internal Validity: As a side effect of the low support, many of the rules that were mined were irrelevant and subsequently negatively affecting our precision. Balancing both precision and recall is challenging, and when we tried to increase the support, we lost many of our rules, which in turn ruined our recall.

External Validity: We have made the study on a single project. Apache ant having 859 classes and 192K lines of codes is pretty small project in comparison to other OSS projects like Linux Kernel (15803K LOC). Implementing the similar method on other large projects will make our work more confident and independent. We believe that this study can be replicated easily on other large software projects having too many branches in it's version control system. Another thing is empirical study within one single project provides historical evidence more than the value it provides for the academic community and scientific development.