It is possible to perform reliable computation on classical computers in the presence of errors. Classical error correcting codes can also be used for reliable communication between two parties. In general, quantum computation can also be performed in the presence of errors. Nevertheless, understanding error thresholds is still an open problem. We are carrying out a comparative study of classical and quantum error correction protocols for information processing and communication. The hope is that the parallels between the two systems will provide deeper understanding of the error thresholds and practical constraints on the physical systems used for implementation of quantum information processing protocols.