This paper proposes a detailed review of the online payment systems currently used in electronic commerce.

For it, we need to contextualize the topic and explain concepts related to the electronic commerce. Then, we do a detailed review of the previous studies on payment systems and for every system studied we detail its main features and performance.

Finally, this paper present a comparative analysis of the most used online payment systems and a study on the perception of consumers based on surveys that were developed for this purpose. For both studies, we present the results and conclusions obtained.

**Keywords:** payment systems, e-commerce, mobile payments, consumers’ perception.