Abstract: The research aims to focus on Recurrent Neural Networks (RNN) and its application to the session-aware recommendations empowered by implicit user feedback and content-based metadata. To investigate the promising architecture of RNN, we implement seven different models utilizing various types of implicit feedback and content information. Our results showed that using RNN with complex implicit feedback increases the next-item prediction comparing the baseline models like Cosine Similarity, Doc2Vec, and Item2Vec.