Roller coaster is an exciting entertainment fascinated by many of today's youngsters because of its stimulation and pleasure. However, the rating system of roller coasters is relatively scarce and mainly based on people's own experience, lacking quantitative analysis on roller coasters' different traits. For instance, Coaster Buzz posted the current top 100 roller coasters on its website, but the rating process is largely based on its members' track records and subjective experience inputs. Admittedly, one of the method's main advantages proves to be the vast sample size and the ratings' rigorous selection in order to exclude the anomalies. But even with the rating results refreshed weekly, the poll on the internet only reflects the opinion of any one person and the riders who provide their experience and scores may mostly come from the same region, so the ranking is not based on the world's scale and will certainly still lose some great rides. Therefore, the most rating methods are highly unstable and unconvincing, making the roller coaster-choosing process inaccurate and the riders being dissatisfied. According to the current needs and lack of quantitative methods of rating, a proper method for ranking the roller-coasters is in dire need.

The question is based on the fact that nowadays roller coaster ranking systems are largely dependent on riders' own subjective inputs, with few considering the roller coasters' own properties. Providing us with the basic information of 300 roller coasters around the world, the question asked us to decide the top ten roller coasters using quantitative assessing methods, compare them with other methods currently being used and analysis the strength and weakness. Besides, we are required to develop the concept of a user-friendly APP which aims to help the potential riders finding the proper roller coasters that will satisfy their needs. Finally, we write a News Release to publicize our quantitative methods, the result of top-10 roller coasters based on the data given and the concept of our newly-designed APP.