Foundations of Information Retrieval

Exercise 6

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Relevance feedback & query expansion

1. A user Jon looks for information about populations of banana slugs and issues a query "banana slug" to the search engine RFSearch, which supports relevance feedback. For this query, RFSearch delivers the following top-3 results:

- D₁="banana slug Ariolimax columbianus"
- D₂="Santa Cruz mountains banana slug"
- D₃="Santa Cruz Campus Mascot"

Jon marks the documents D₁, D₂ as relevant and D₃ as not relevant for his information need. RFSearch uses term frequency and the Rocchio RF algorithm, with α = β = γ = 1. Which search query will be executed next based on the Jon’s feedback? Specify the weights for each query term. Sort the terms in an alphabetical order.

2. Specify α, β, and γ values that facilitate a query retrieving pages similar to a relevant page within the search result using the Rocchio RF algorithm.