HW: Latent Semantic Indexing

Please note Even though the homework assignments are optional and will be neither corrected nor graded, you are encouraged to answer them, as they will help you prepare for your final exam. Send your homework by email to: usman@ifis.cs.tu-bs.de. Please write your solutions in English. Due date: before the next lecture.

1. Given a term-document matrix and after applying SVD on it, explain in your own words what are the semantics of the U, S and V matrices. Avoid using formulas, if possible.
2. Explain what LSI achieves that the previous retrieval models we saw in the lecture were unable to do?
3. What happens in low rank approximation? Is it reasonable to use it in information retrieval setup?