Business Evaluation Report

Assumption: Expected number of recommendations needed before a user rents a movie: 5

Movie Rental Profitability:

	Best Case	Average Case	Worst Case
Cost of Storing Uncompressed Movie	0.75/day * 0 days = $0	0.75/day * 1.5 days = $1.125	0.75/day * 3 days = $2.25
Cost of Movie Recommendation	$0.01 * 5	$0.01 * 5	$0.01 * 5
Total Cost	$0.05	$1.175	$2.3
Expected Profit	$ 5 - 0.05 = $ 4.95	$ 5 - 1.175= $ 3.825	$ 5 - 2.3 = $ 2.7

Movie Purchase Profitability:

	Best Case	Average Case	Worst Case
Cost of Storing Uncompressed Movie	0.75/day * 0 days = $0	0.75/day * 7.5 days = $5.625	0.75/day * 15 days = $11.25
Cost of Movie Recommendation	$0.01 * 5	$0.01 * 5	$0.01 * 5
Total Cost	$0.05	$5.675	$11.3
Expected Profit	$15 - 0.05 = $14.95	$15 - 5.675= $9.325	$ 12 - 11.3 = $ 0.7

Recommendations:

- The worst case scenario for movie purchase is very concerning. The margin of profit is very low in this case. If the cost to fetch the movie and decompress on demand is not exorbitant, then reducing this constraint of keeping the movie in decompressed format for 15 days should be relaxed to a lower value.
- Similarly the worst case scenario for movie rental shows that profit margins are very narrow and reducing the constraint on the number of days the movie is kept in decompressed format if relaxed, could be useful.
- Once the movie is rented or purchase, recommendations could be made such that the user is reminded to watch the movie they have just rented/purchase but not watched.