











































Costs for a Projection Operation				
	• Costs for auplication elimination (DE)			
	+ costs for extracting attributes (EA)			
		Disk I/Os	Comparisons	
	NLDE + EA	2 <i>R</i>	({ <i>R</i> } x ({ <i>R</i> } - 1))/ 2	
	(large buffer)			
	NLDE + EA	(<i>R</i> x (<i>R</i> + 1)) / 2	({ <i>R</i> } x ({ <i>R</i> } - 1))/ 2	
	(a page size buffer)	+ <i>R</i>		
	SDE + EA	<i>R</i> (2log ₂ <i>R</i> +3)	${R}\log_2{R} + {R} - 1$	
	HDE + EA	2 <i>R</i>	{ <i>R</i> }	
	(Optimistic)			
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