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Searching Sequential Files

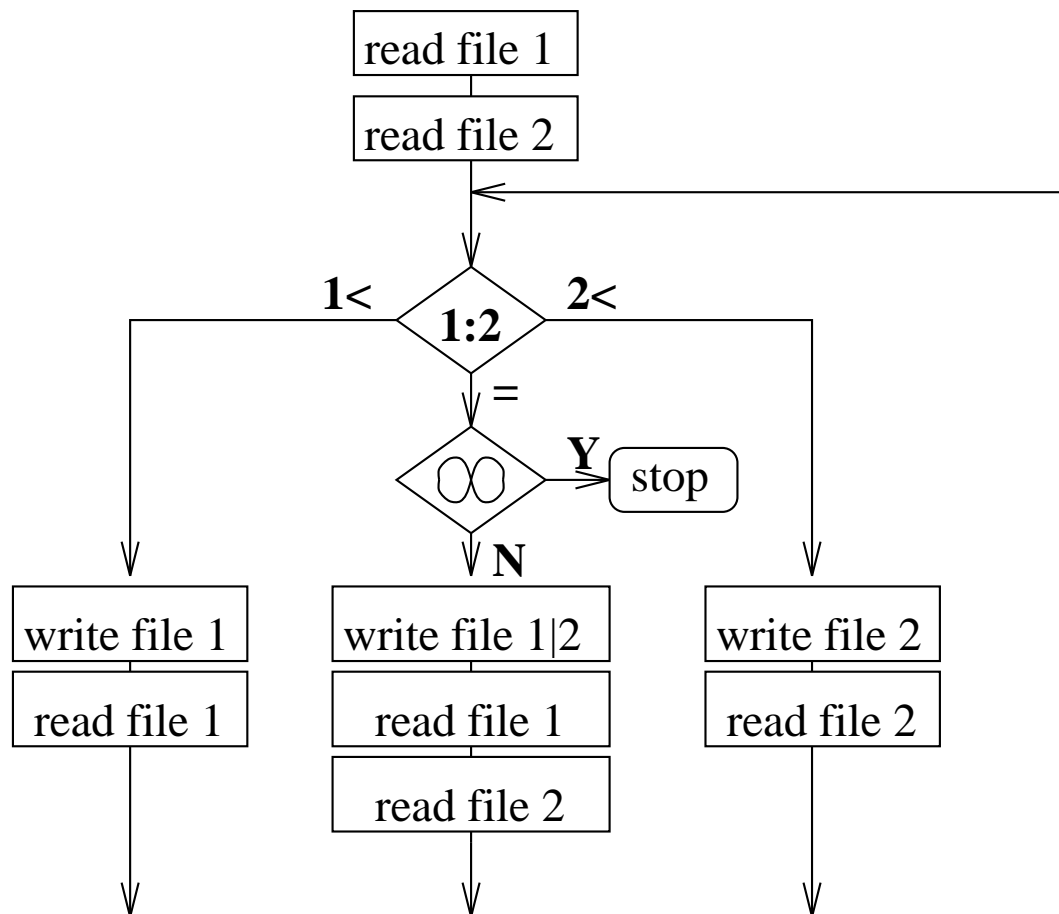
	Successful	Unsuccessful
Ordered	$\frac{n}{2}$	$\frac{n}{2}$
Unordered	$\frac{n}{2}$	n

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Merging Sequential Files

1. Union

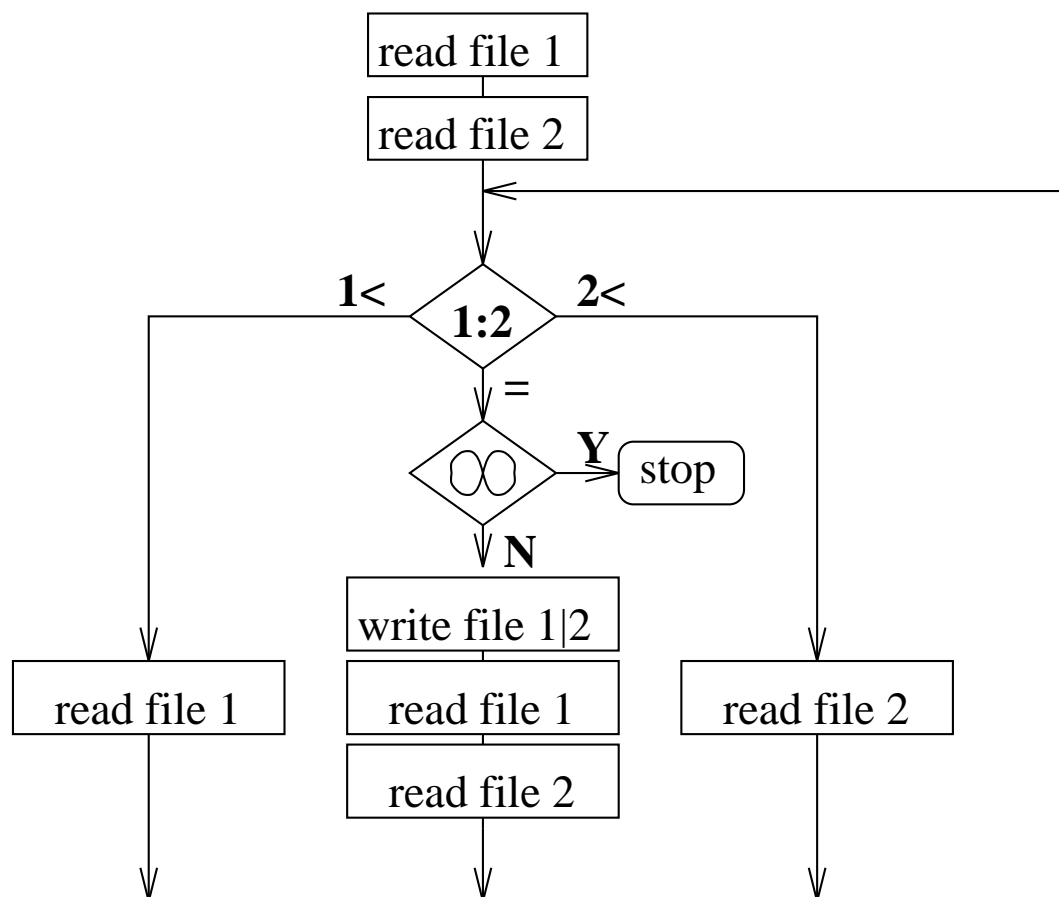


(“read file ..” means read a record, return ∞ at EOF;

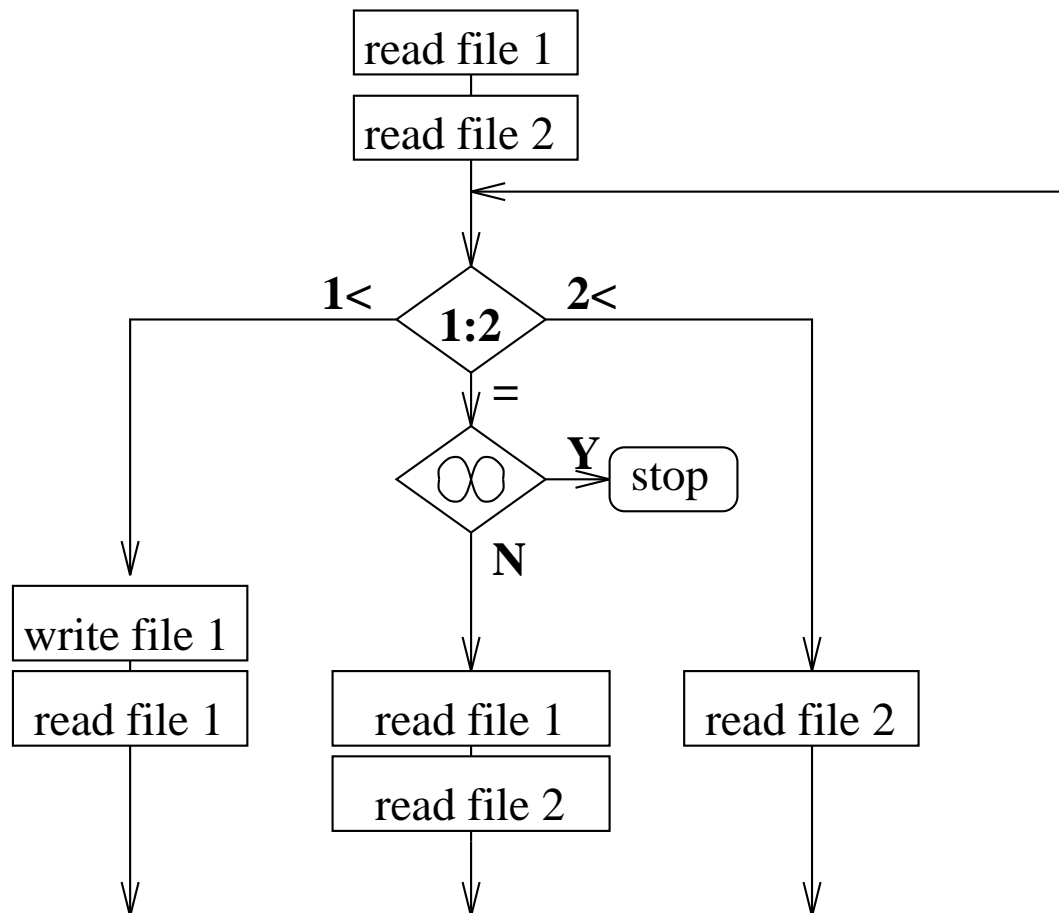
“1:2” means compare key fields;

“1<” means key of file 1 is low)

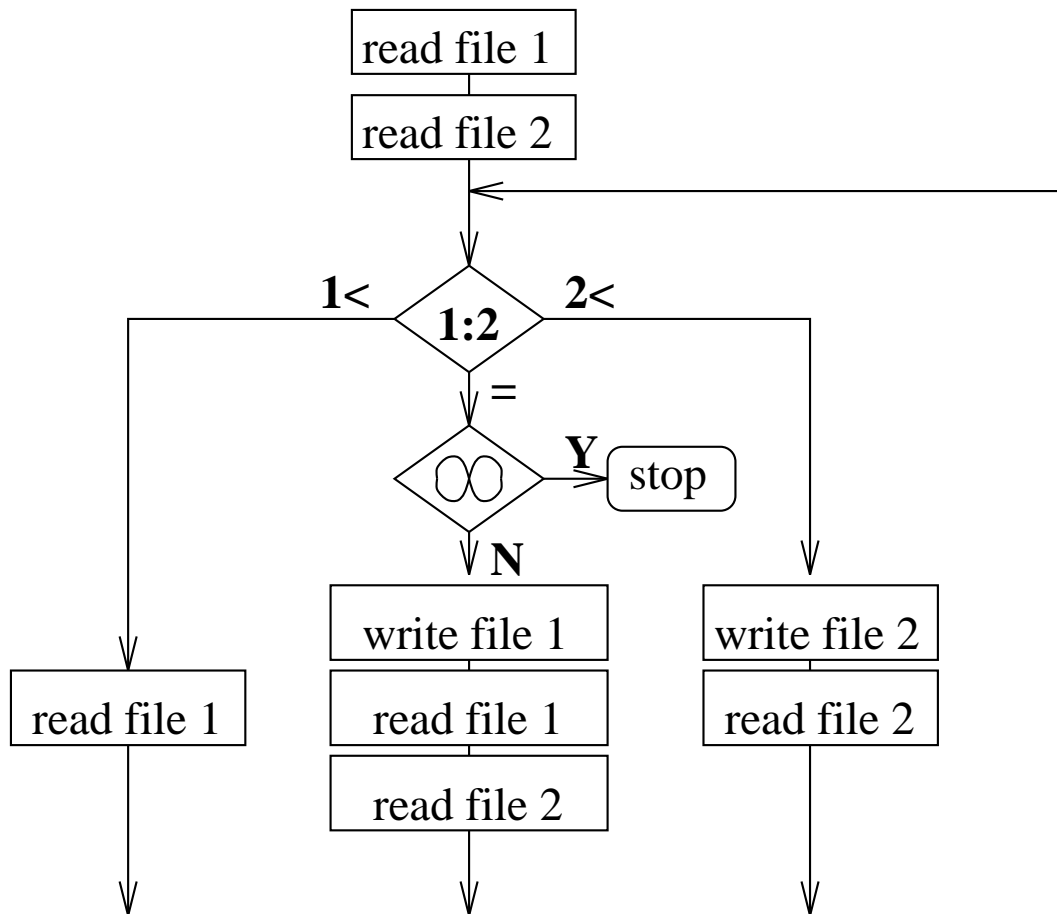
2. Intersection



3. Difference

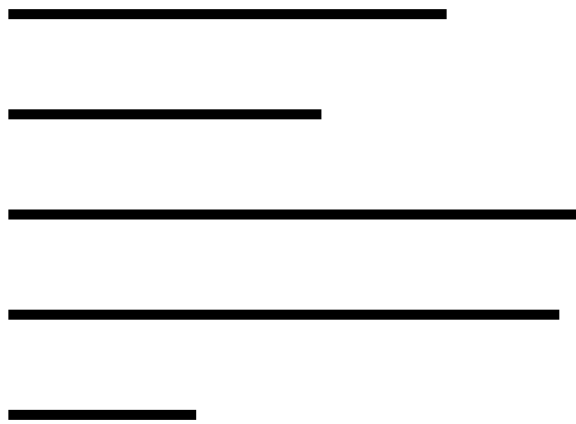


4. Update (2 with 1)



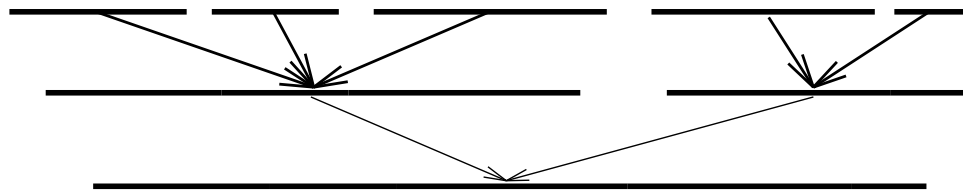
Sorting Sequential Files

1. Initial Runs



$r = N/2F, F$ records in RAM

2. Merge

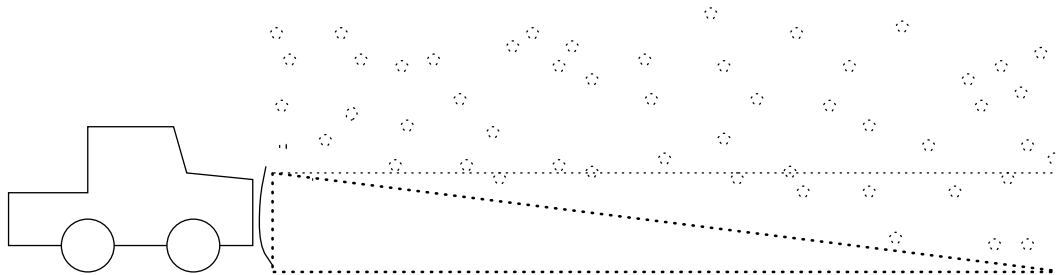
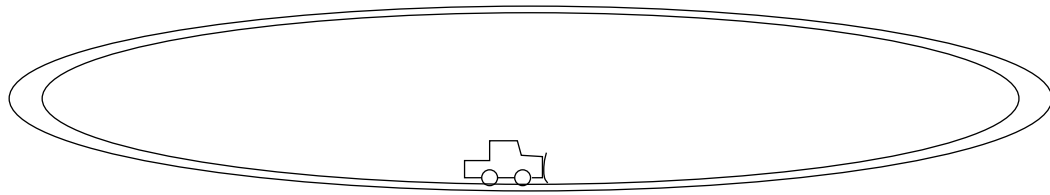


$1 + \log_f r$ read passes

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The Snowplough Argument



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