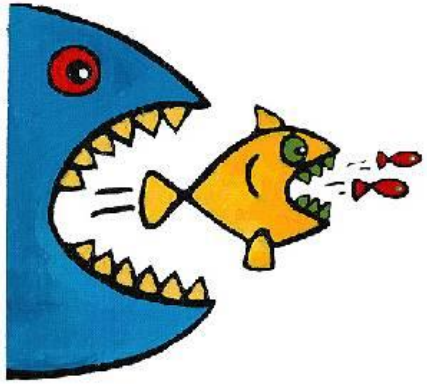
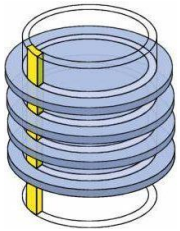


Big Data



"Disk" Merge join

External merge sorting

Exemple pass 0 : SORT

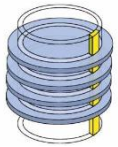
4 blocks relation S

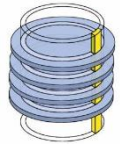
S0
ZE
SA
MD
KA
GE
FF
FD
DC
BE
AC

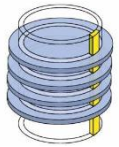
S1
UE
NH
JA
RG
IG
LC
JC
UH
BG
YH

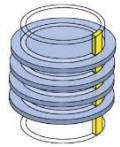
S2
RB
CA
AE
VC
VF
JE
DG
ZF
TE
TF

S3
IB
XG
ND
AF
EH
ZD
OB
LE
RA
EB

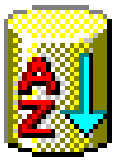






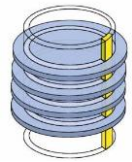


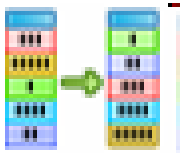
Pass 0 : 1 block run sorterd



Sort

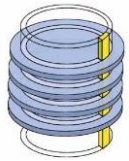
S0	S1	S2	S3
ZE	UE	RB	IB
SA	NH	CA	XG
MD	JA	AE	ND
KA	RG	VC	AF
GE	IG	VF	EH
FF	LC	JE	ZD
FD	JC	DG	OB
DC	UH	ZF	LE
BE	BG	TE	RA
AC	YH	TF	EB



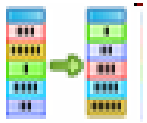


S0	S1	S2	S3
ZE	YH	ZF	ZD
SA	UH	VF	XG
MD	UE	VC	RA
KA	RG	TF	OB
GE	NH	TE	ND
FF	LC	RB	LE
FD	JC	JE	IB
DC	JA	DG	EH
BE	IG	CA	EB
AC	BG	AE	AF

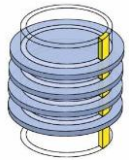
1 block Run index (0..9)



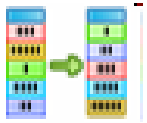
	S0	S1	S2	S3
9	ZE	YH	ZF	ZD
8	SA	UH	VF	XG
7	MD	UE	VC	RA
6	KA	RG	TF	OB
5	GE	NH	TE	ND
4	FF	LC	RB	LE
3	FD	JC	JE	IB
2	DC	JA	DG	EH
1	BE	IG	CA	EB
0	AC	BG	AE	AF



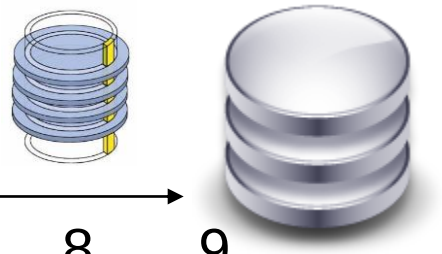
1 block Run index (0..9)

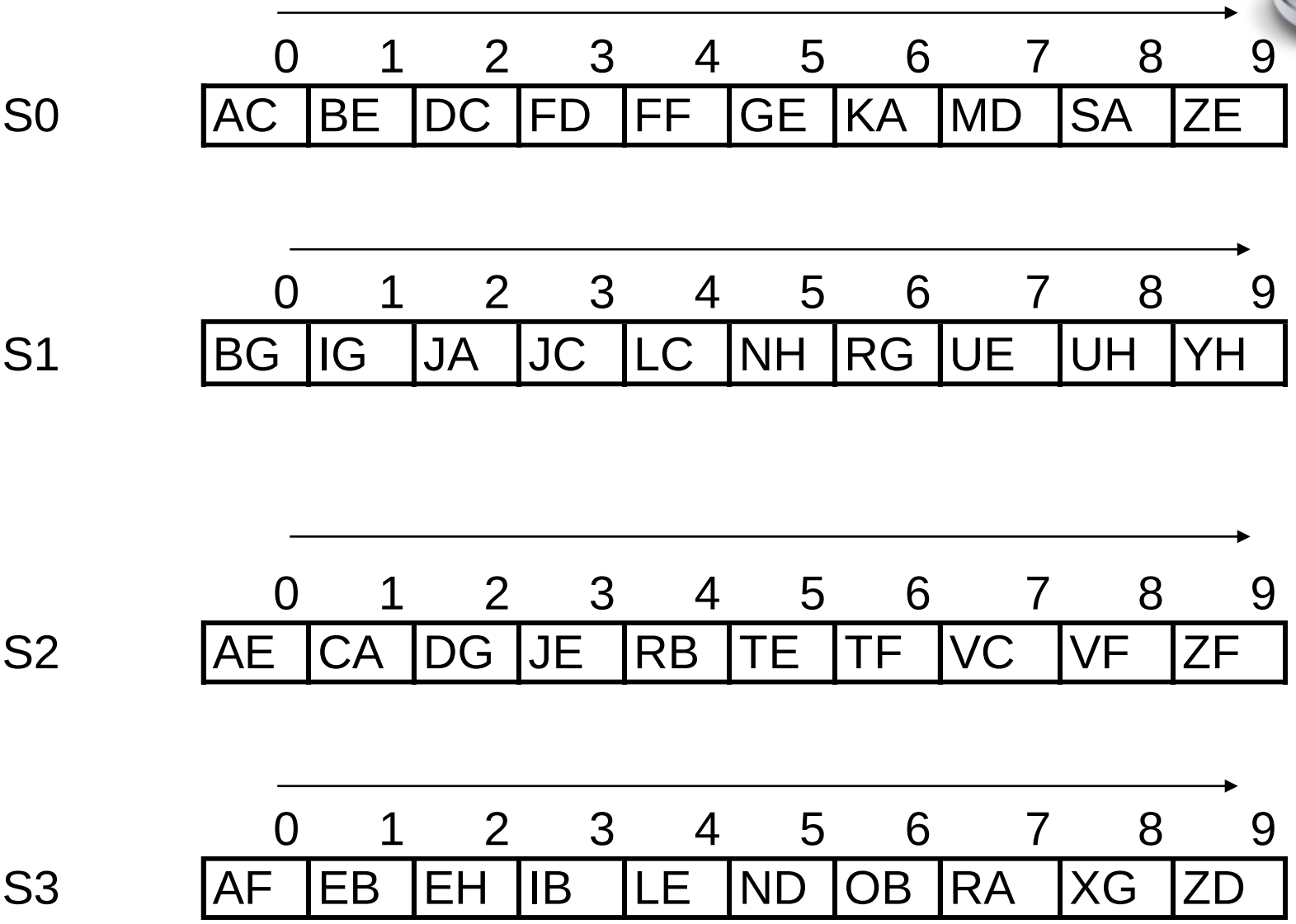


	S0	S1	S2	S3
9	ZE	YH	ZF	ZD
8	SA	UH	VF	XG
7	MD	UE	VC	RA
6	KA	RG	TF	OB
5	GE	NH	TE	ND
4	FF	LC	RB	LE
3	FD	JC	JE	IB
2	DC	JA	DG	EH
1	BE	IG	CA	EB
0	AC	BG	AE	AF



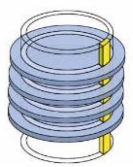
1 block Run index (0..9)





1 block Run index (0..9)

pass0



	0	1	2	3	4	5	6	7	8	9
S0	AC	BE	DC	FD	FF	GE	KA	MD	SA	ZE
S1	BG	IG	JA	JC	LC	NH	RG	UE	UH	YH
S2	AE	CA	DG	JE	RB	TE	TF	VC	VF	ZF
S3	AF	EB	EH	IB	LE	ND	OB	RA	XG	ZD