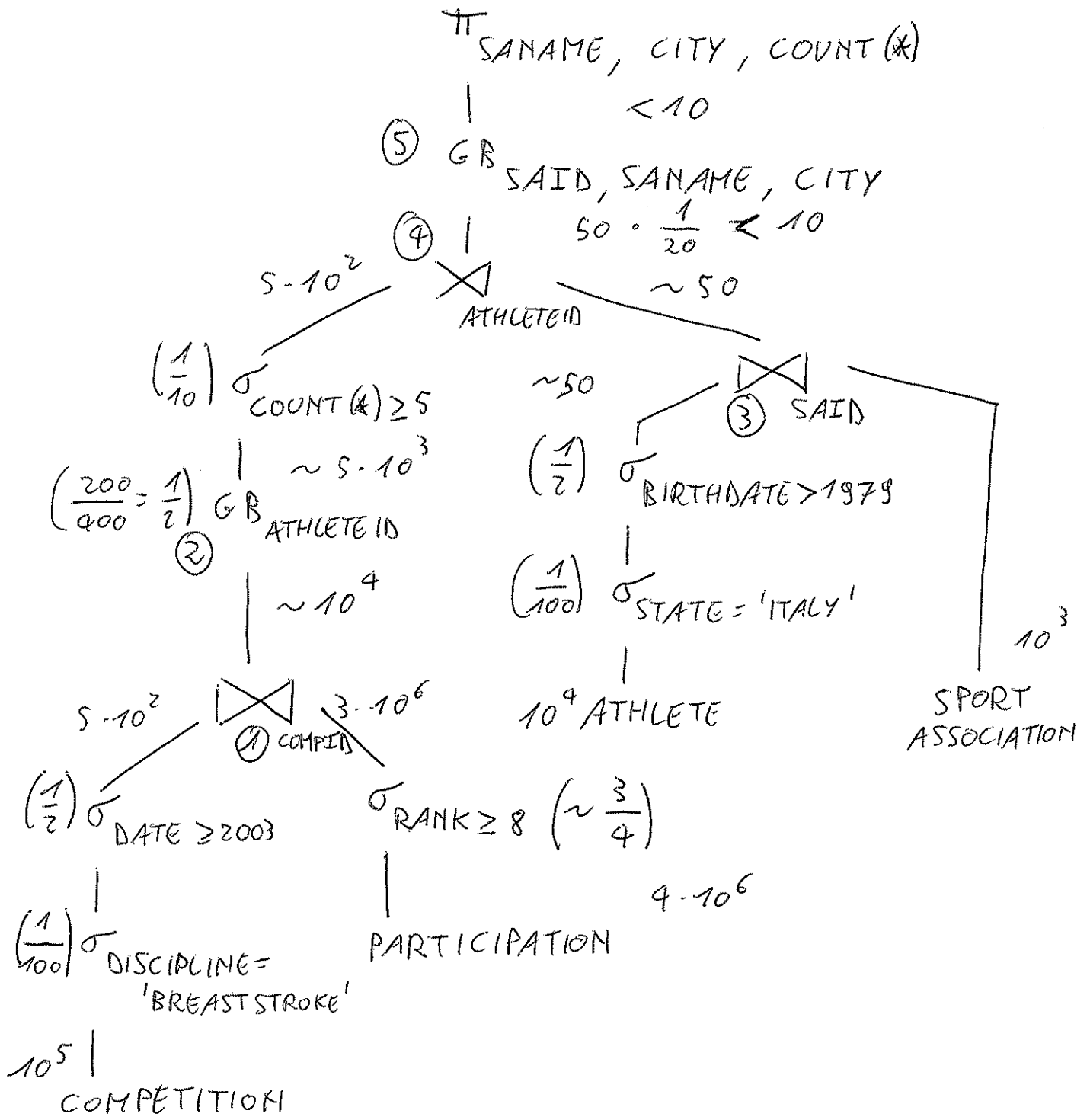


QUERY 1 - SPORT EXERCISE



ACCESS PATH

COMPETITION	: TABLE ACCESS FULL + FILTER
PARTICIPATION	: TABLE ACCESS FULL + FILTER
ATHLETE	: TABLE ACCESS FULL + FILTER
SPORT_ASSOCIATION	: TABLE ACCESS FULL

① NL : INNER = COMPETITION \Rightarrow OK
OUTER = PARTICIPATION

HJ : NO IF I CONSIDER COMPETITION ($5 \cdot 10^2$)
SMALL AND DOES NOT HELP ②

MJ : NO BECAUSE I HAVE TO SORT THE
TABLES

② GB HASH

③ NL : INNER = ATHLETE \Rightarrow OK
OUTER = SPORT-ASSOCIATION

HJ : NO TABLES TOO SMALL ($< 10^3$)

MJ : YES BUT I NEED TO SORT THE
TABLES

④ NL : INNER = ③ \Rightarrow OK
OUTER = ②

HJ : NO TABLES TOO SMALL ($< 10^3$)

MJ : YES BUT I NEED TO SORT THE
TABLES

NO DOES NOT HELP ⑤

⑤ GB SORT

INDEX

COMPETITION : - SECONDARY HASH INDEX ON DISCIPLINE
⇒ YES BECAUSE SELECTIVITY IS HIGH
($\frac{1}{100}$)

- SECONDARY HASH ON (DISCIPLINE, DATE)
⇒ YES BECAUSE SELECTIVITY IS HIGH ($\frac{1}{200}$)
⇒ NO FOR MAINTENANCE COSTS

PARTICIPATION : - SECONDARY B⁺ TREE ON RANK
⇒ NO SELECTIVITY TOO LOW ($\frac{3}{4}$)

ATHLETE : - SECONDARY HASH ON STATE
⇒ YES SELECTIVITY HIGH ($\frac{1}{100}$)
- SECONDARY HASH ON (STATE, BIRTHDATE)
⇒ YES SELECTIVITY HIGH ($\frac{1}{200}$)
⇒ NO FOR MAINTENANCE COSTS

SPORT_ASSOCIATION ; NO INDEX

GB ANTICIPATION

② IT IS NOT POSSIBLE BECAUSE JOIN ATTRIBUTE
AND GB ATTRIBUTE ARE TWO DISJOINT SETS

ACCESS PATH WITH INDEXES

COMPETITION : INDEX RANGE SCAN (ON DISCIPLINE)
+ ACCESS BY ROWID

PARTICIPATION : TABLE ACCESS FULL + FILTER

ATHLETE : INDEX RANGE SCAN (ON STATE)
+ ACCESS BY ROWID

SPORT_ASSOCIATION : TABLE ACCESS FULL