

P: P. COMID = C. COMID

Q: AC.COMID = C.COMID

R: PA. AID = AC. AID

#### ACCESS PATH:

- · PLANNING: TABLE ACCESS FULL + FILTER
- · COMEDY: TABLE ACCESS FULL+FILTER
- .PLAY- ACTOR- IN -COMEDY: TABLE ACCESS FULL
- .PLAY ACTOR: TABLE ACCESS FULL + FILTER

### JOIN:

- 1) NESTED LOOP (INNER: COMEDY, OUTER = PLANNING)
- (2) NESTED LOOP (INNER: PLAY-ACTOR, OUTER= PLAY-ACTOR-IN-COMEDY)
- (3) HASH JOIN

GROUP BY: HASH

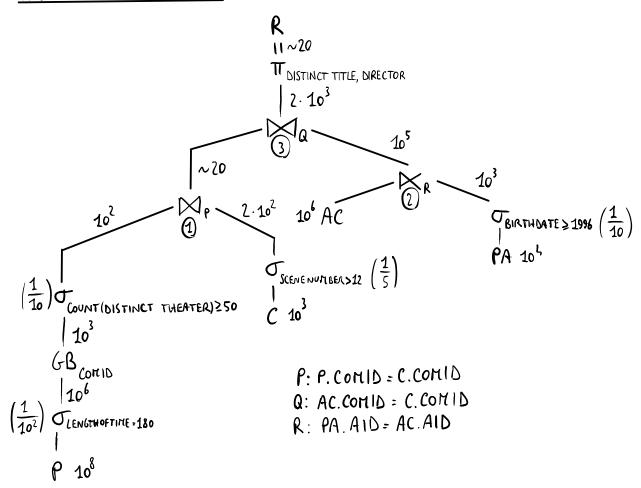
#### INDEX:

- · PLANNING: SECONDARY B+-TREE ON LENGTHOFTIME
- . PLAY-ACTOR: SECONDARY B+-TREE ON BIRTHDATE

# ACCESS PATH WITH INDICES:

- . PLANNING: INDEX RANGE SCAN + ACCESS BY ROWID
- · COMEDY: TABLE ACCESS FULL + FILTER
- · PLAY-ACTOR IN-COMEDY: TABLE ACCESS FULL
- · PLAY-ACTOR: INDEX RANGE SCAN + ACCESS BY ROWID

## GROUP BY ANTICIPATION:



# GROUP BY: HASIT

## JOIN:

- 1) NESTED LOOP (INNER = PLANNING, OUTER = COMEDY)
- (2) NESTED LOOP (INNER: PLAY-ACTOR, OUTER= PLAY-ACTOR-IN-COMEDY)
- (3) NESTED LOOP (INNER: LEFT BRANCH, OUTER: RIGHT BRANCH)