**Database Technologies**

**UE19CS344**

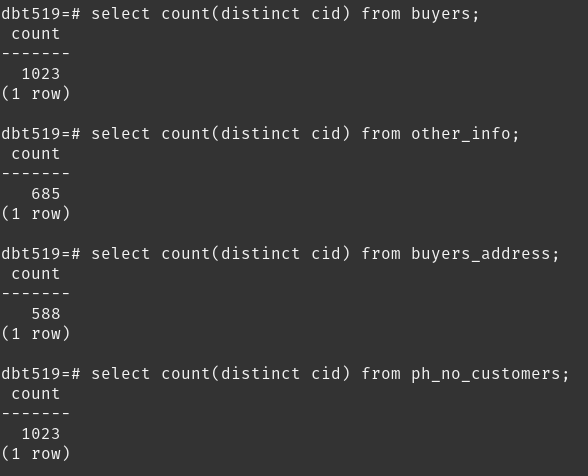
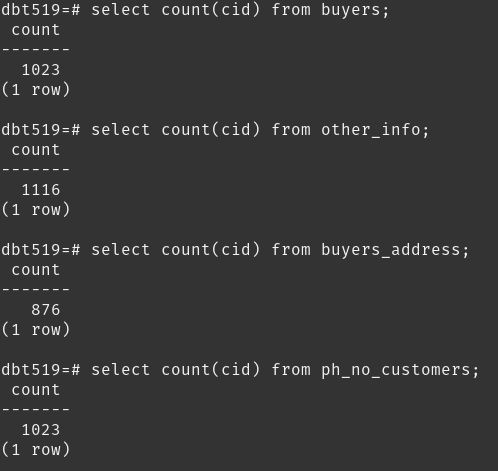
**6th Semester, Academic Year 2021-22**

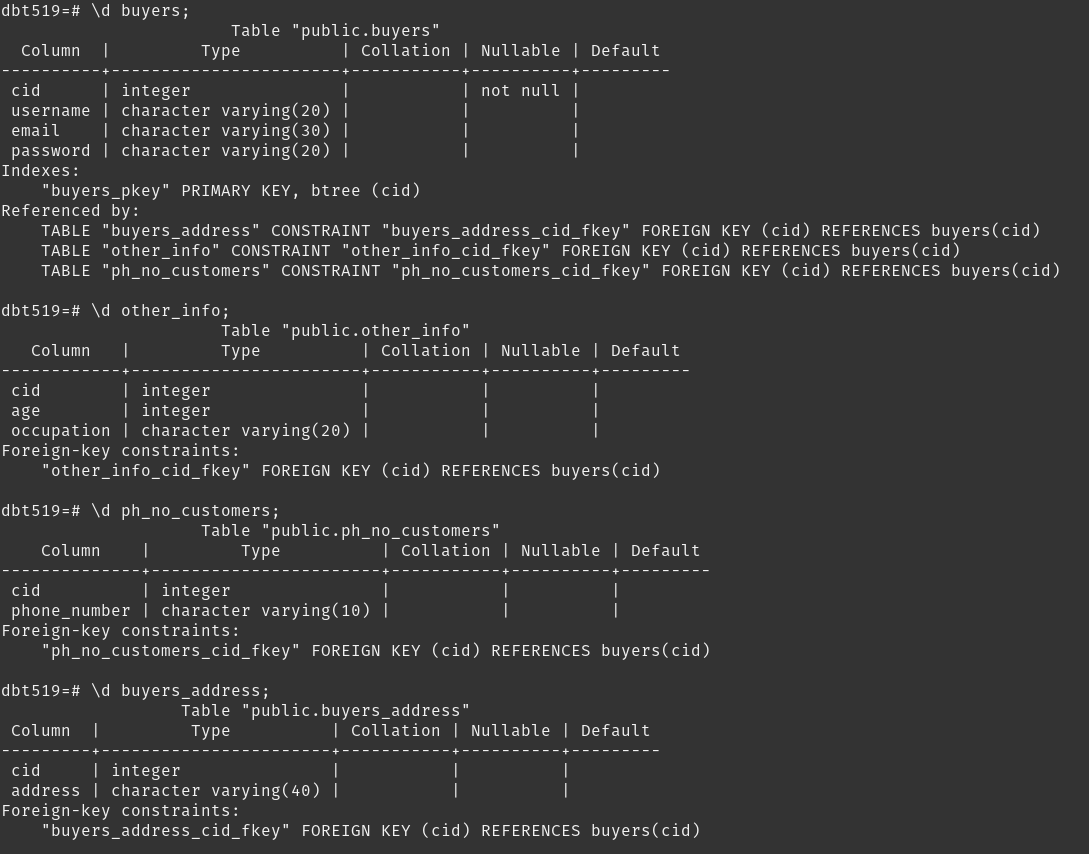
Week #8: Multi-table joins

(A4) Date: 15/3/2022

|  |  |  |
| --- | --- | --- |
| Name :  SUMUKH RAJU BHAT | SRN :  PES1UG19CS519 | Section :  H |

About the tables involved in join:





Summary: 4 tables => 4! permutations => 24 permutations

1,2,3,4 indicates the position of table in multi-table join query. Eg: buyers = 2, other\_info = 4, buyers\_addresses = 1, ph\_no\_customers = 3 indicates the query:

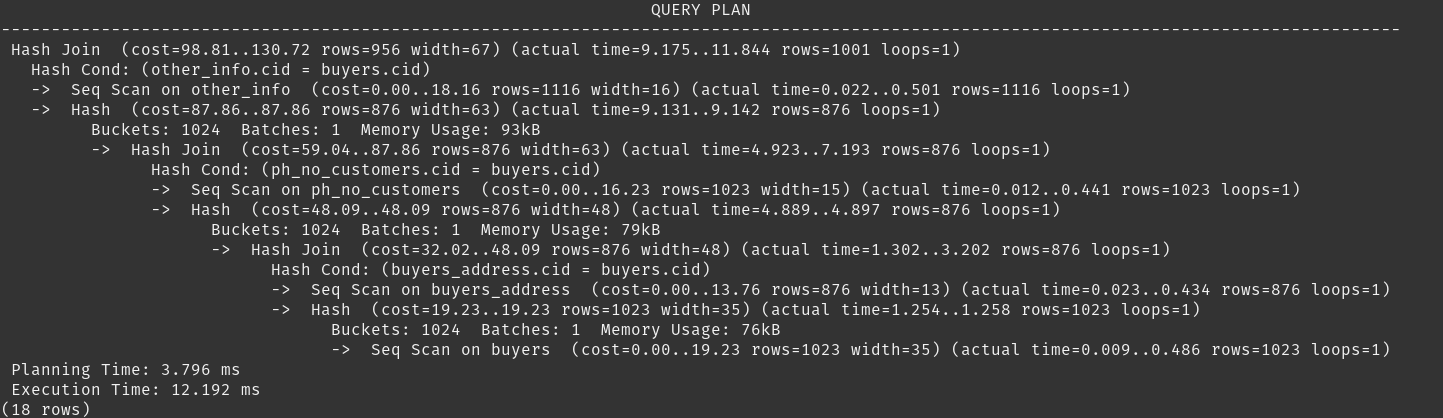
select \* from

*buyers\_address* natural join *buyers* natural join *ph\_no\_customers* natural join *other\_info*;

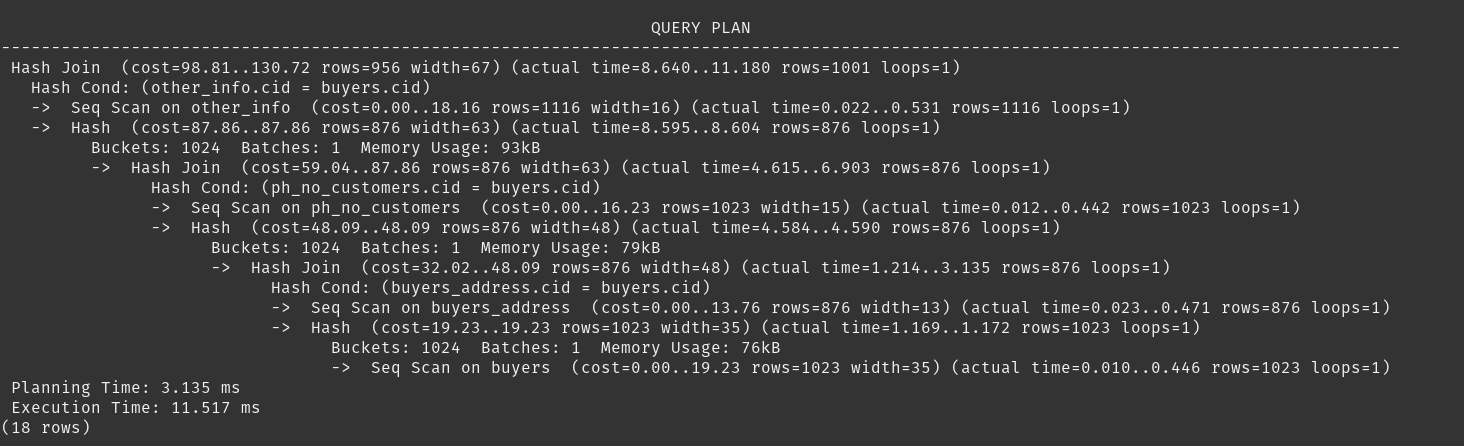
|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| # | buyers | other\_info | buyers\_address | ph\_no\_customers |  | Execution Speed(ms) |
| 1 | 1 | 2 | 3 | 4 |  | 12.192 |
| 2 | 1 | 2 | 4 | 3 |  | 11.517 |
| 3 | 1 | 3 | 2 | 4 |  | 11.55 |
| 4 | 1 | 3 | 4 | 2 |  | 12.484 |
| 5 | 1 | 4 | 2 | 3 |  | 12.275 |
| 6 | 1 | 4 | 3 | 2 |  | 12.275 |
| 7 | 2 | 1 | 3 | 4 |  | 12.668 |
| 8 | 2 | 1 | 4 | 3 |  | 13 |
| 9 | 2 | 3 | 1 | 4 |  | 11.707 |
| 10 | 2 | 3 | 4 | 1 |  | 11.985 |
| 11 | 2 | 4 | 1 | 3 |  | 12.509 |
| 12 | 2 | 4 | 3 | 1 |  | 12.417 |
| 13 | 3 | 1 | 2 | 4 |  | 12.237 |
| 14 | 3 | 1 | 4 | 2 |  | 13.138 |
| 15 | 3 | 2 | 1 | 4 |  | 11.451 |
| 16 | 3 | 2 | 4 | 1 |  | 12.372 |
| 17 | 3 | 4 | 1 | 2 |  | 12.332 |
| 18 | 3 | 4 | 2 | 1 |  | 12.418 |
| 19 | 4 | 1 | 2 | 3 |  | 13.648 |
| 20 | 4 | 1 | 3 | 2 |  | 13.058 |
| 21 | 4 | 2 | 1 | 3 |  | 12.824 |
| 22 | 4 | 2 | 3 | 1 |  | 11.015 |
| 23 | 4 | 3 | 1 | 2 |  | 11.593 |
| 24 | 4 | 3 | 2 | 1 |  | 11.351 |

Screenshots:

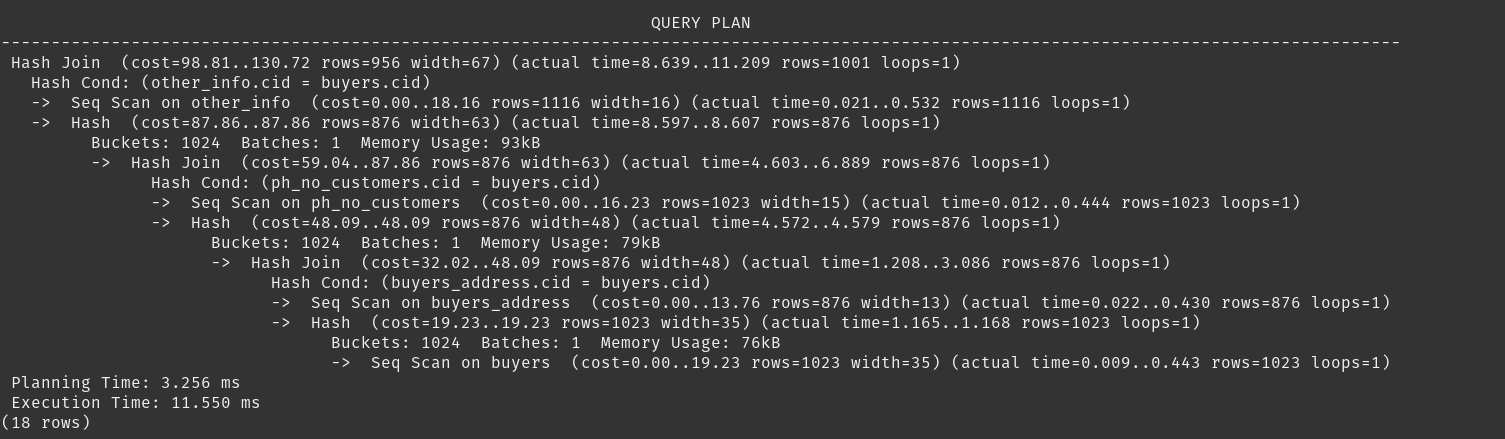
1. explain analyze select \* from buyers natural join other\_info natural join buyers\_address natural join ph\_no\_customers;



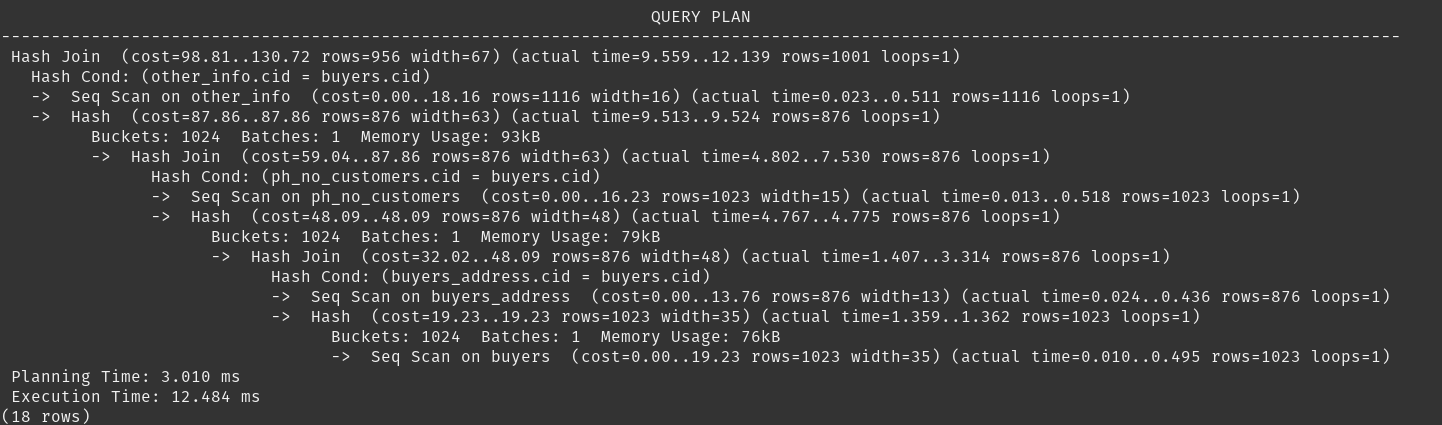
2. explain analyze select \* from buyers natural join other\_info natural join ph\_no\_customers natural join buyers\_address;



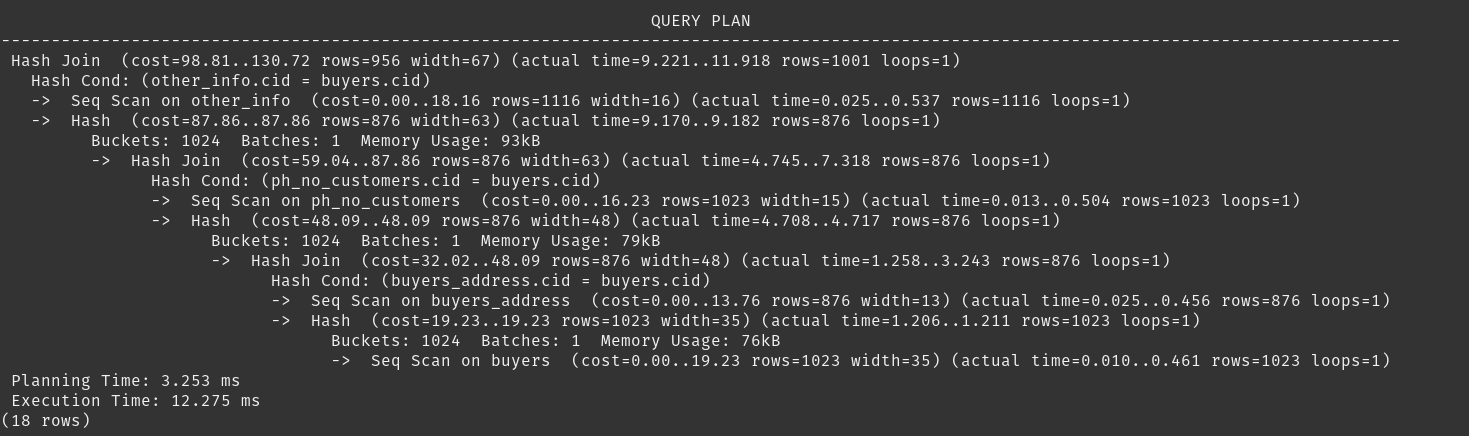
3. explain analyze select \* from buyers natural join buyers\_address natural join other\_info natural join ph\_no\_customers;



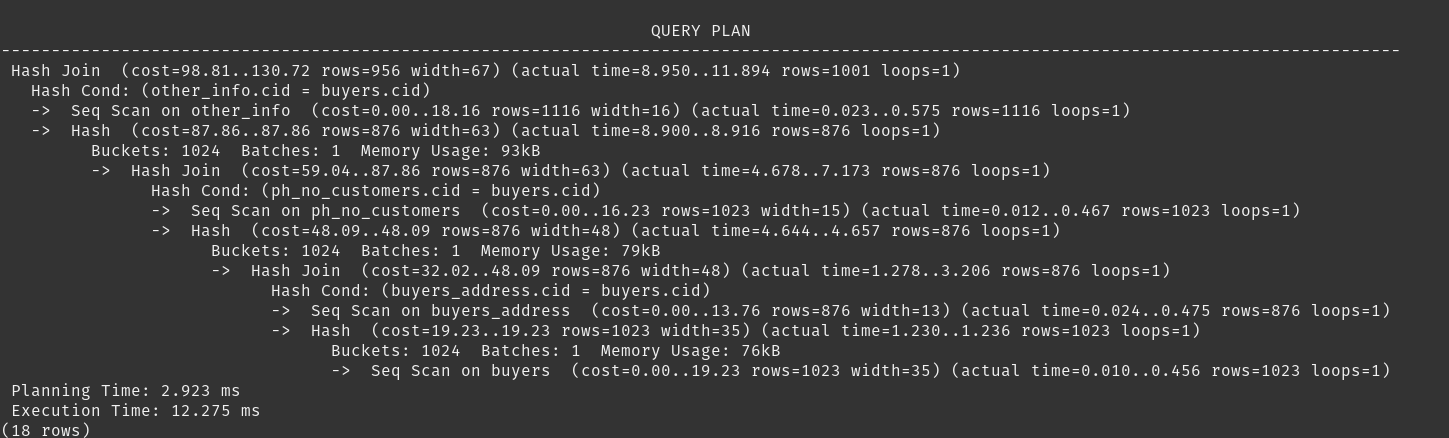
4. explain analyze select \* from buyers natural join buyers\_address natural join ph\_no\_customers natural join other\_info;



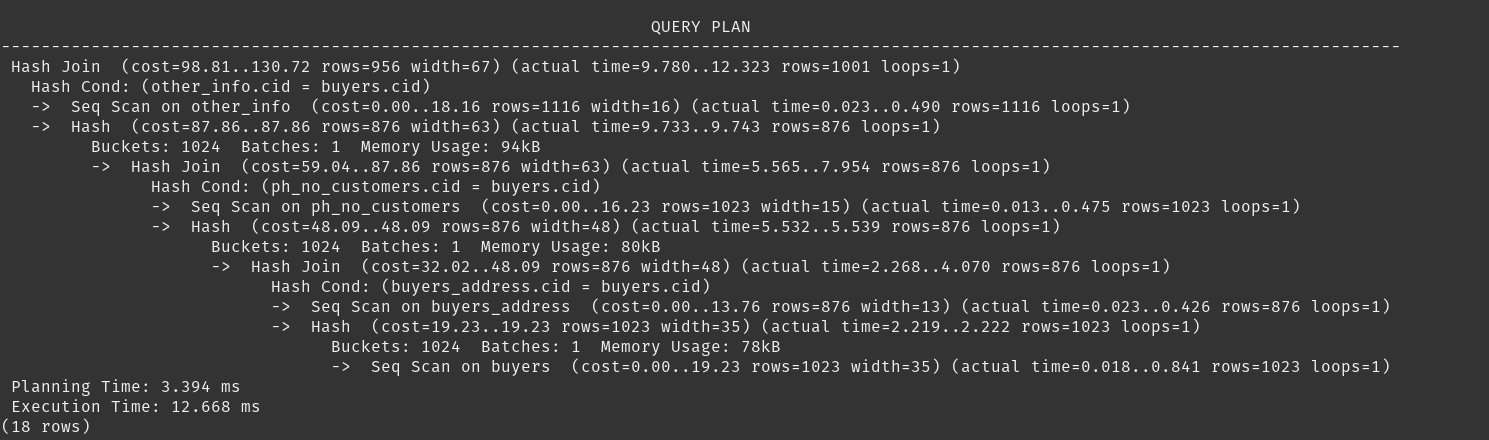
5. explain analyze select \* from buyers natural join ph\_no\_customers natural join other\_info natural join buyers\_address;



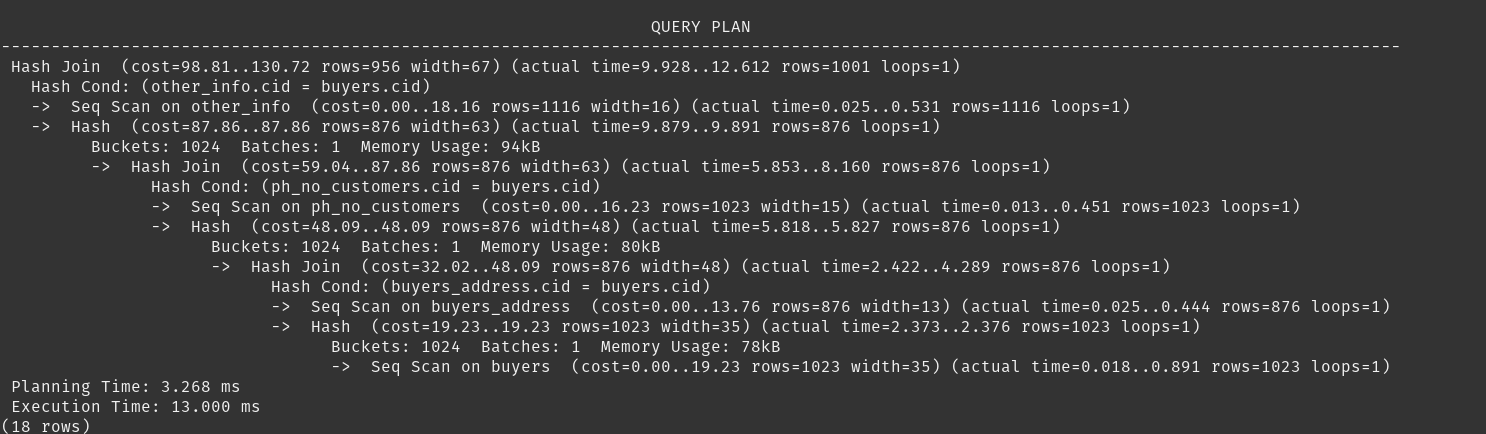
6. explain analyze select \* from buyers natural join ph\_no\_customers natural join buyers\_address natural join other\_info;



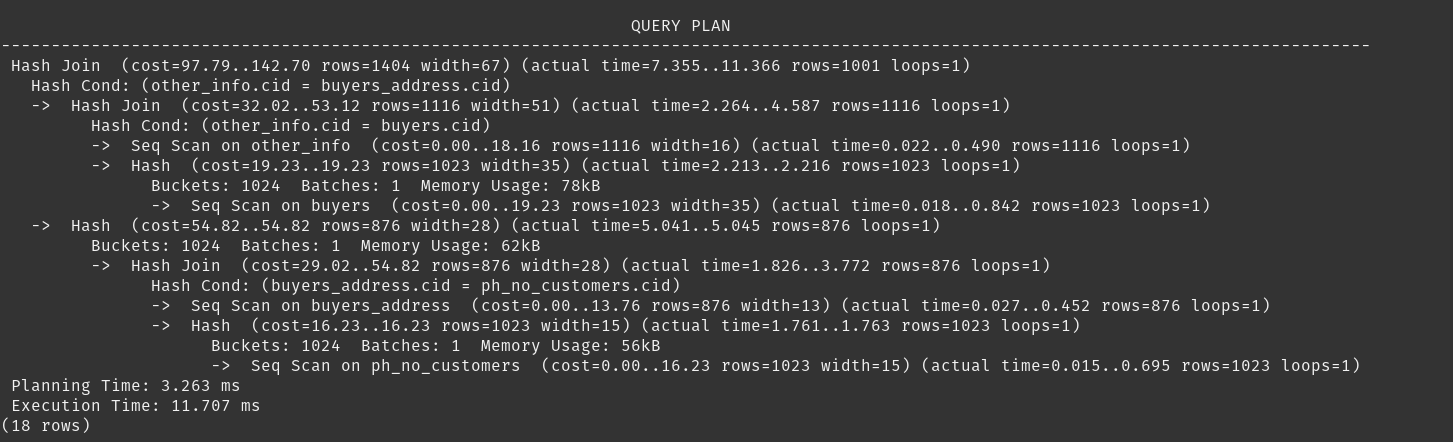
7. explain analyze select \* from other\_info natural join buyers natural join buyers\_address natural join ph\_no\_customers;



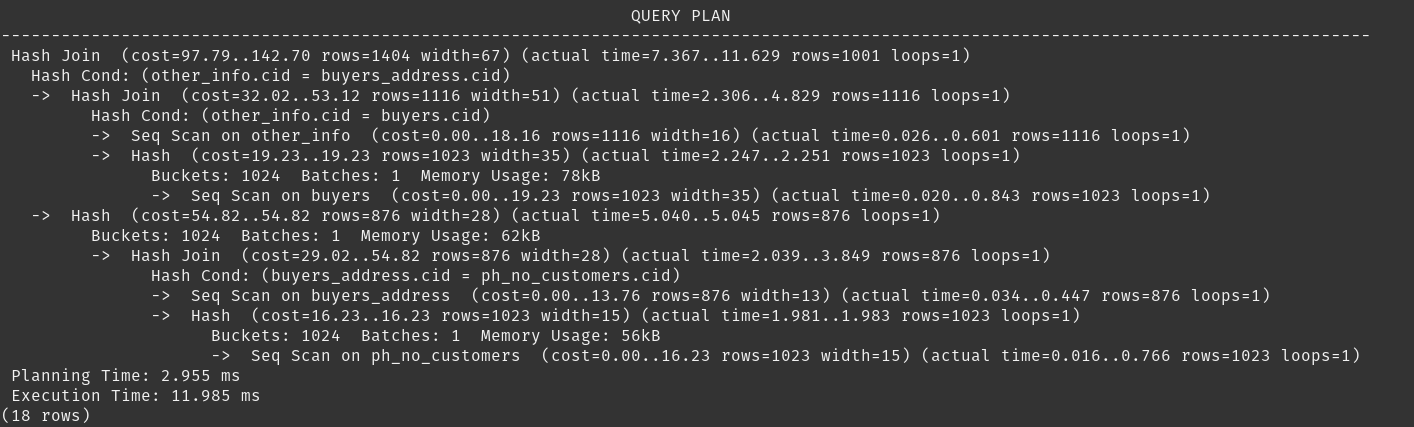
8. explain analyze select \* from other\_info natural join buyers natural join ph\_no\_customers natural join buyers\_address;



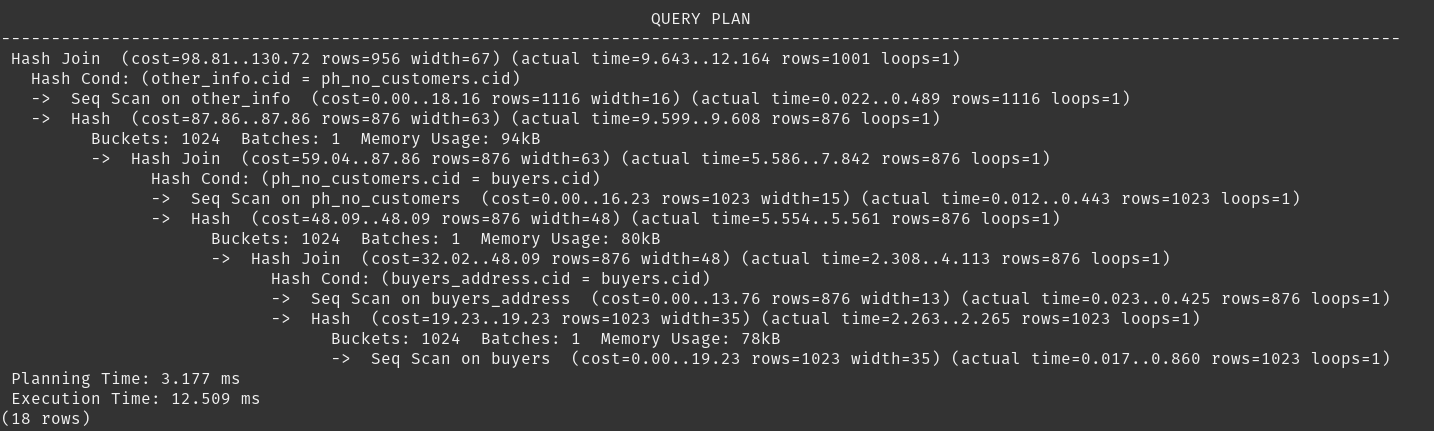
9. explain analyze select \* from other\_info natural join buyers\_address natural join buyers natural join ph\_no\_customers;



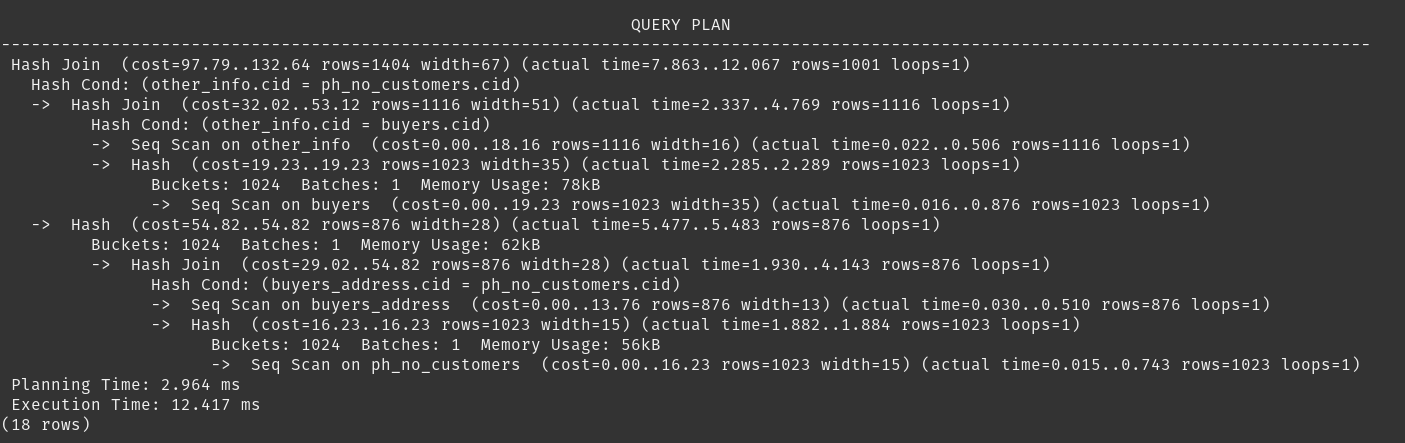
10. explain analyze select \* from other\_info natural join buyers\_address natural join ph\_no\_customers natural join buyers;



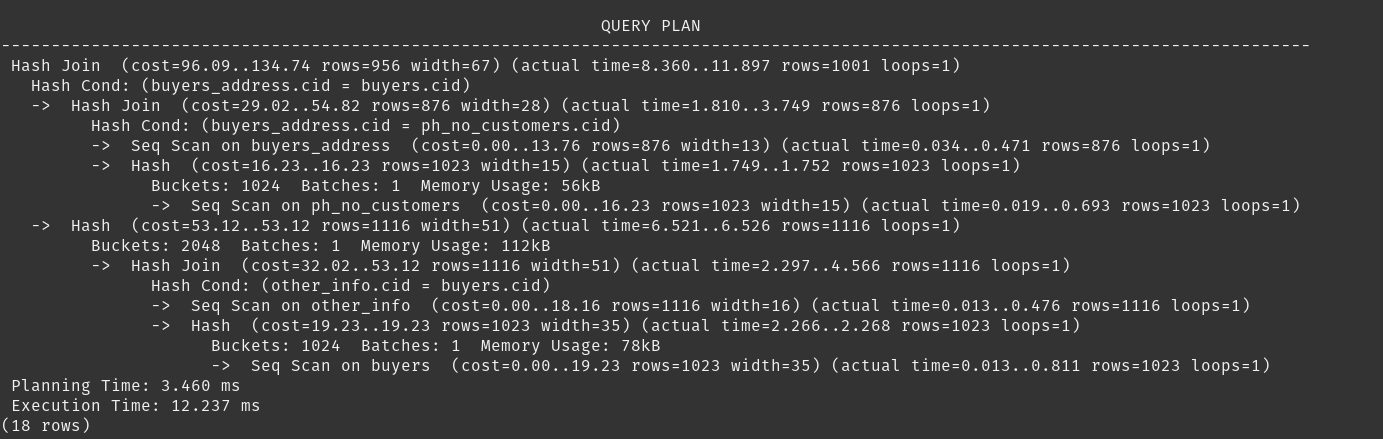
11. explain analyze select \* from other\_info natural join ph\_no\_customers natural join buyers natural join buyers\_address;



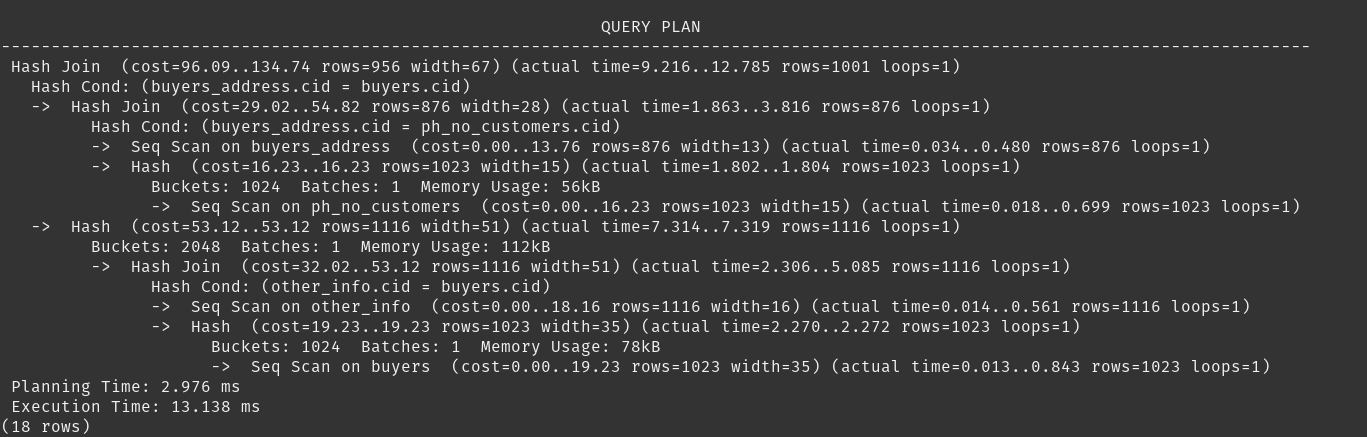
12. explain analyze select \* from other\_info natural join ph\_no\_customers natural join buyers\_address natural join buyers;



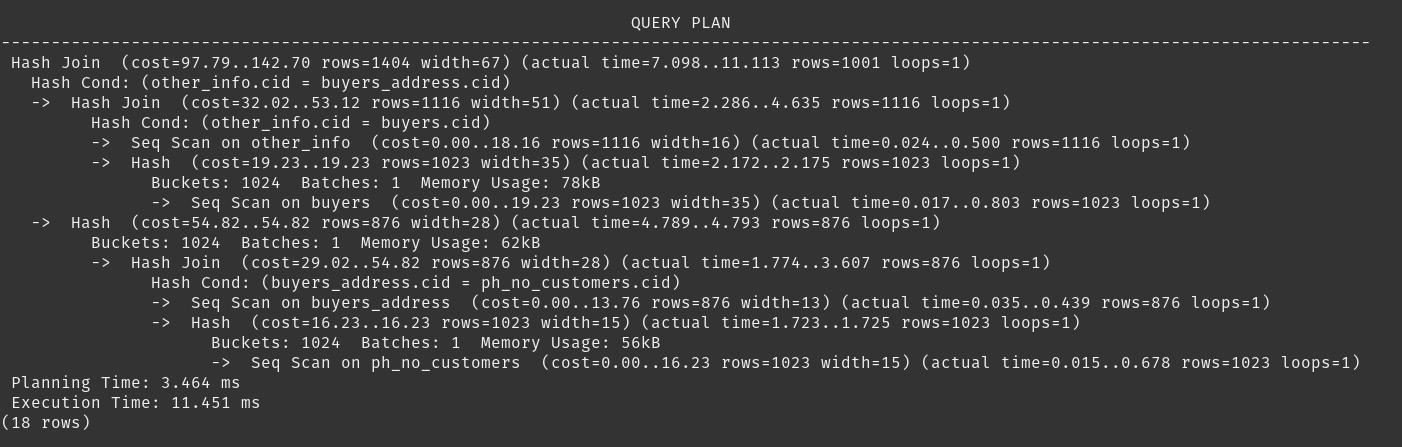
13. explain analyze select \* from buyers\_address natural join buyers natural join other\_info natural join ph\_no\_customers;



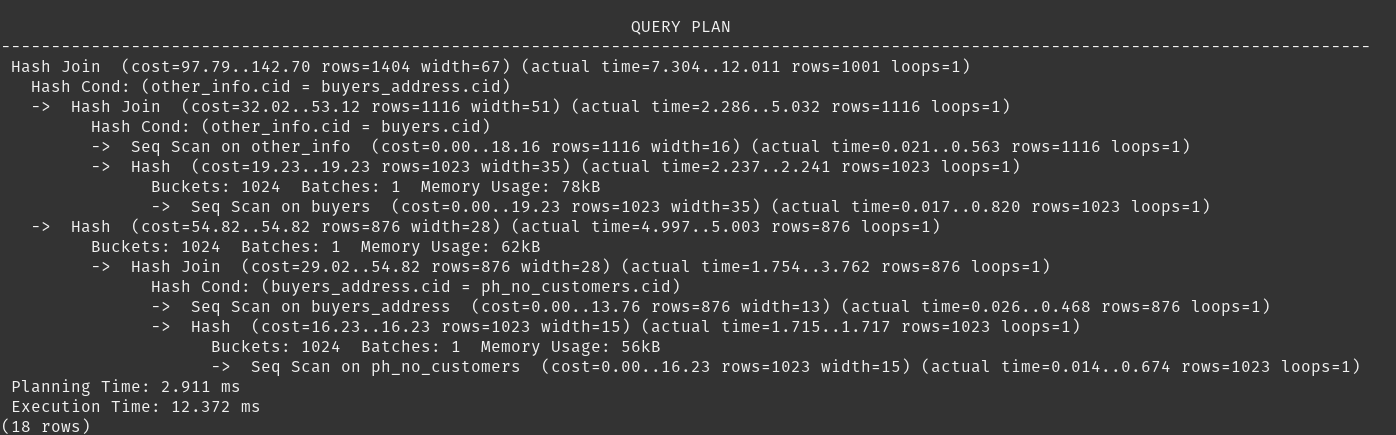
14. explain analyze select \* from buyers\_address natural join buyers natural join ph\_no\_customers natural join other\_info;



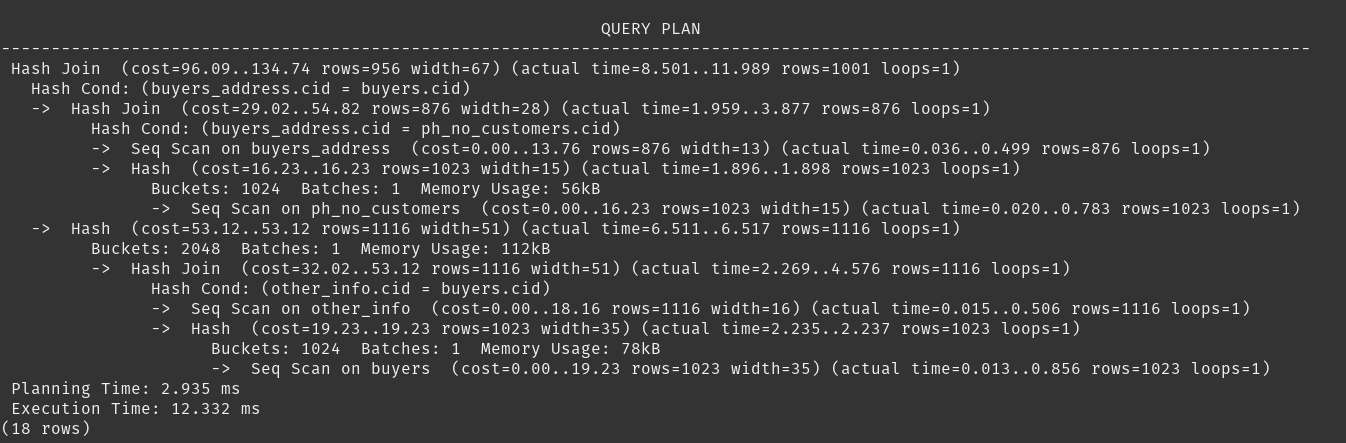
15. explain analyze select \* from buyers\_address natural join other\_info natural join buyers natural join ph\_no\_customers;



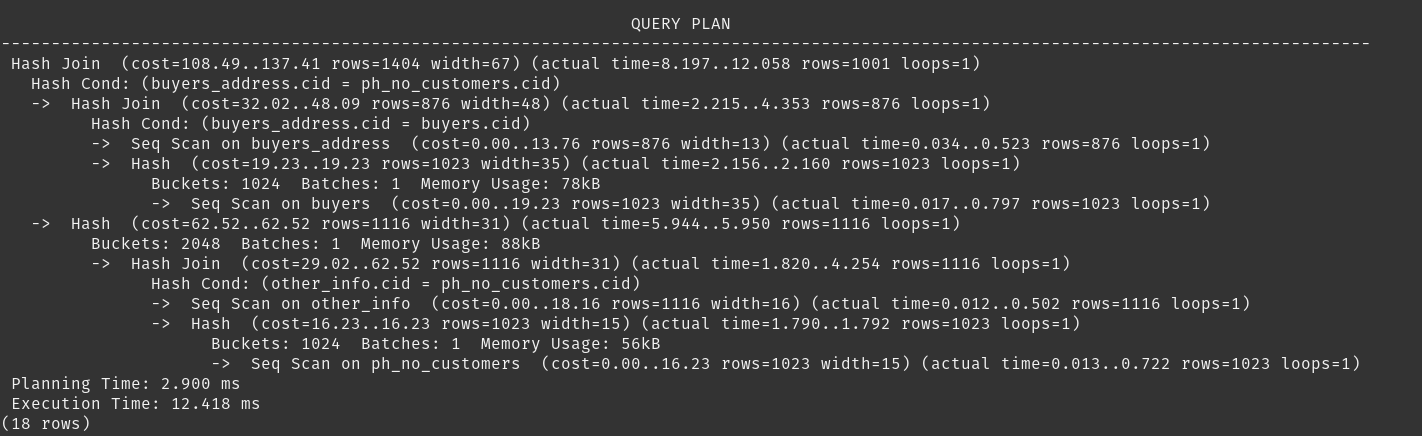
16. explain analyze select \* from buyers\_address natural join other\_info natural join ph\_no\_customers natural join buyers;



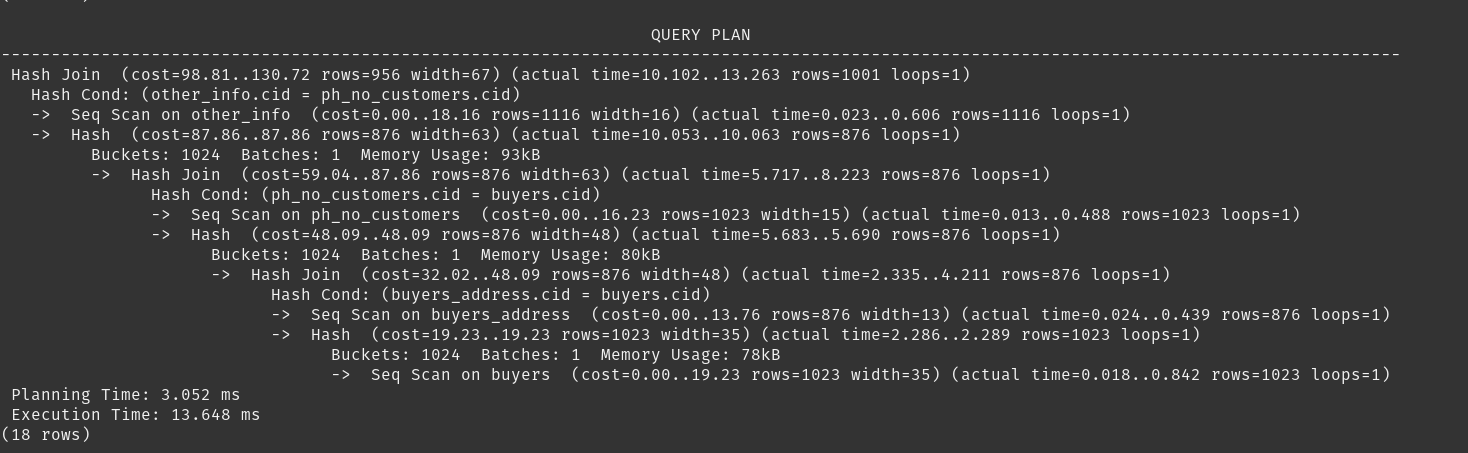
17. explain analyze select \* from buyers\_address natural join ph\_no\_customers natural join buyers natural join other\_info;



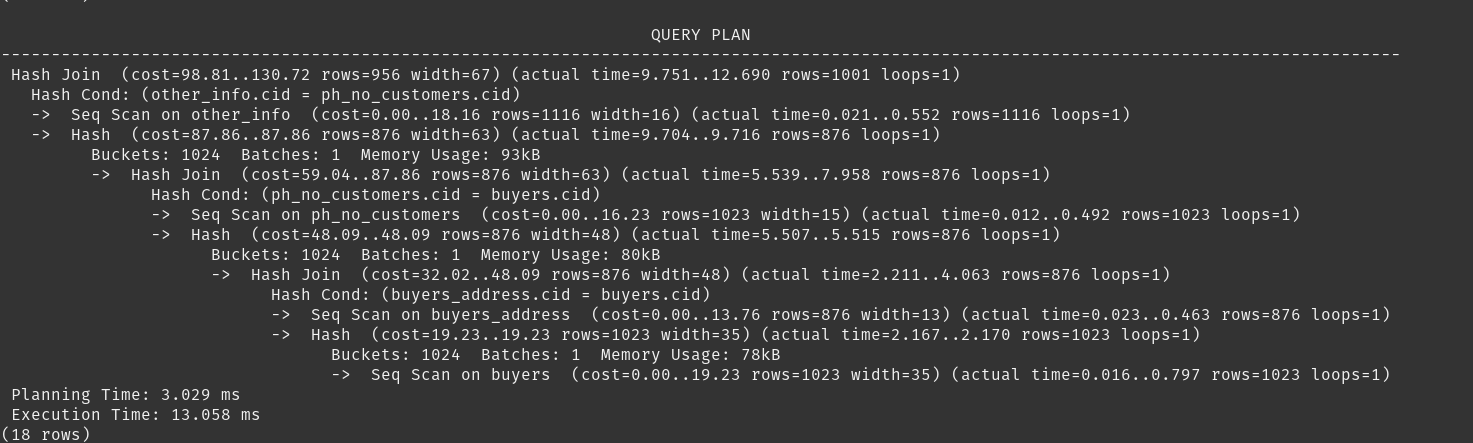
18. explain analyze select \* from buyers\_address natural join ph\_no\_customers natural join other\_info natural join buyers;



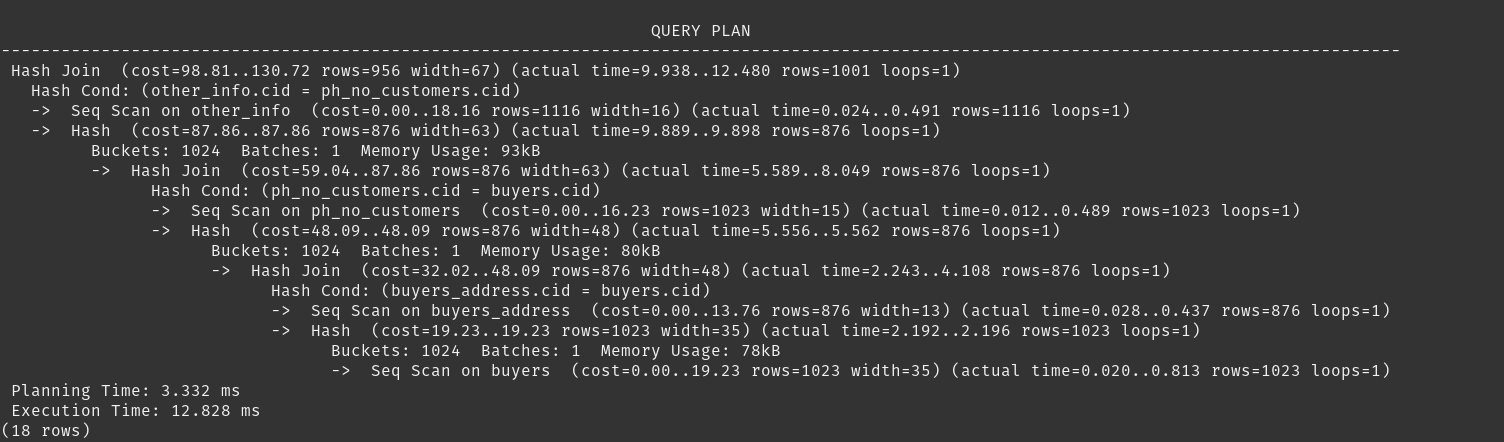
19. explain analyze select \* from ph\_no\_customers natural join buyers natural join other\_info natural join buyers\_address;



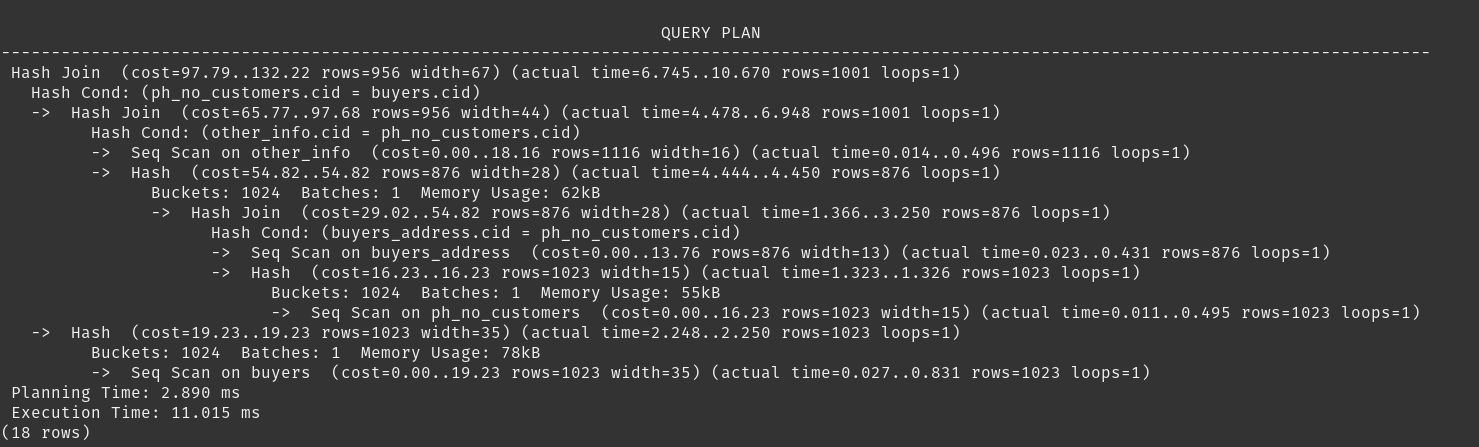
20. explain analyze select \* from ph\_no\_customers natural join buyers natural join buyers\_address natural join other\_info;



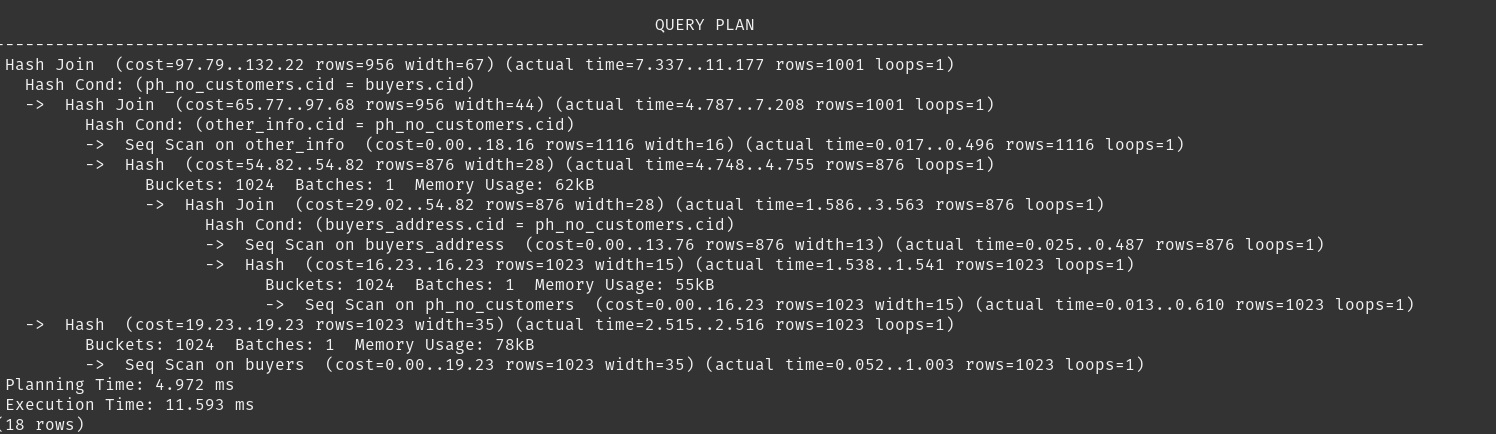
21. explain analyze select \* from ph\_no\_customers natural join other\_info natural join buyers natural join buyers\_address;



22. explain analyze select \* from ph\_no\_customers natural join other\_info natural join buyers\_address natural join buyers;



23. explain analyze select \* from ph\_no\_customers natural join buyers\_address natural join buyers natural join other\_info;



24. explain analyze select \* from ph\_no\_customers natural join buyers\_address natural join other\_info natural join buyers;

