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NamasteSQL

100 Coding Problems

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100 DAY CODING PROBLEMS

🤔 **Problem Statement:**

6 - ELECTRICITY CONSUMPTION

You have access to data from an electricity billing system, detailing the electricity usage and cost for specific households over billing periods in the years 2023 and 2024. Your objective is to present the total electricity consumption, total cost and average monthly consumption for each household per year display the output in ascending order of each household id & year of the bill.

🚩 **Difficult Level : EASY**

INPUT

BILL_ID	HOUSEHOLD_ID	BILLING_PERIOD	CONSUMPTION_KWH	TOTAL_COST
1	101	2023-01	320.5	48.08
2	101	2023-02	280	42
3	101	2023-03	310.5	46.58
4	101	2023-04	330.5	49.58
5	101	2023-05	310	46.5
6	101	2023-06	290.5	43.58
7	101	2023-07	320	48
8	101	2023-08	340.5	51.08
9	101	2023-09	300	45
10	101	2023-10	310.5	46.58
11	101	2023-11	320	48
12	101	2023-12	310.5	46.58
13	101	2024-01	320.5	48.08
14	101	2024-02	280	42
15	101	2024-03	310.5	46.58
16	101	2024-04	330.5	49.58
17	101	2024-05	310	46.5
18	101	2024-06	290.5	43.58
19	101	2024-07	320	48
20	101	2024-08	340.5	51.08
21	101	2024-09	300	45
22	101	2024-10	310.5	46.58
23	101	2024-11	320	48

24	101	2024-12	310.5	46.58
25	102	2023-01	450	67.5
26	102	2023-02	470	70.5
27	102	2023-03	480	72
28	102	2023-04	460	69
29	102	2023-05	480	72
30	102	2023-06	490	73.5
31	102	2023-07	500	75
32	102	2023-08	510	76.5
33	102	2023-09	520	78
34	102	2023-10	530	79.5
35	102	2023-11	540	81
36	102	2023-12	550	82.5
37	102	2024-01	560	84
38	102	2024-02	570	85.5
39	102	2024-03	580	87
40	102	2024-04	590	88.5
41	102	2024-05	600	90
42	102	2024-06	610	91.5
43	102	2024-07	620	93
44	102	2024-08	630	94.5
45	102	2024-09	640	96
46	102	2024-10	650	97.5
47	102	2024-11	660	99
48	102	2024-12	670	100.5
49	103	2023-01	510.7	76.61
50	103	2023-02	520.7	78.11
51	103	2023-03	530.7	79.61
52	103	2023-04	540.7	81.11
53	103	2023-05	550.7	82.61

54	103	2023-06	560.7	84.11
55	103	2023-07	570.7	85.61
56	103	2023-08	580.7	87.11
57	103	2023-09	590.7	88.61
58	103	2023-10	600.7	90.11
59	103	2023-11	610.7	91.61
60	103	2023-12	620.7	93.11
61	103	2024-01	630.7	94.61
62	103	2024-02	640.7	96.11
63	103	2024-03	650.7	97.61
64	103	2024-04	660.7	99.11
65	103	2024-05	670.7	100.61
66	103	2024-06	680.7	102.11
67	103	2024-07	690.7	103.61
68	103	2024-08	700.7	105.11
69	103	2024-09	710.7	106.61
70	103	2024-10	720.7	108.11
71	103	2024-11	730.7	109.61
72	103	2024-12	740.7	111.11

OUTPUT

HOUSEHOLD_ID	BILLING_YEAR	CONSUMPTION_KWH	TOTAL_COST	AVG_CONSUMPTION_KWH
101	2023	3743.5	561.56	311.9583333
101	2024	3743.5	561.56	311.9583333
102	2023	5980	897	498.3333333
102	2024	7380	1107	615
103	2023	6788.4	1018.32	565.7
103	2024	8228.4	1234.32	685.7

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Step - 3 : Writing the sql query to solve the

```
SELECT HOUSEHOLD_ID
    ,substr(BILLING_PERIOD, 1, 4) AS billing_year
    ,sum(CONSUMPTION_KWH) AS consumption_kwh
    ,sum(TOTAL_COST) AS total_cost
    ,avg(CONSUMPTION_KWH) AS avg_consumption_kwh
FROM electricity_bill
GROUP BY HOUSEHOLD_ID
    ,substr(BILLING_PERIOD, 1, 4)
```