

Execution Output;

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ain123@ZainPC: /mnt/c/Users/ X   ain123@ZainPC: /mnt/c/Users/ X   ain123@ZainPC: /mnt/c/Users/ X   +   v
Sent event: {'song_id': 404, 'timestamp': 1742234059.193597, 'region': 'US', 'action': 'play'}
Sent event: {'song_id': 202, 'timestamp': 1742234060.623838, 'region': 'US', 'action': 'play'}
Sent event: {'song_id': 404, 'timestamp': 1742234062.2033002, 'region': 'EU', 'action': 'play'}
Sent event: {'song_id': 101, 'timestamp': 1742234062.7711947, 'region': 'APAC', 'action': 'play'}
Sent event: {'song_id': 202, 'timestamp': 1742234064.1420352, 'region': 'US', 'action': 'play'}
Sent event: {'song_id': 202, 'timestamp': 1742234065.2519883, 'region': 'EU', 'action': 'play'}
Sent event: {'song_id': 404, 'timestamp': 1742234067.0168614, 'region': 'EU', 'action': 'play'}
Sent event: {'song_id': 303, 'timestamp': 1742234067.833732, 'region': 'APAC', 'action': 'play'}
Sent event: {'song_id': 505, 'timestamp': 1742234069.3603172, 'region': 'US', 'action': 'play'}
Sent event: {'song_id': 101, 'timestamp': 1742234070.6591845, 'region': 'US', 'action': 'play'}
Sent event: {'song_id': 202, 'timestamp': 1742234071.2211664, 'region': 'US', 'action': 'play'}
Sent event: {'song_id': 101, 'timestamp': 1742234072.126233, 'region': 'APAC', 'action': 'play'}
Sent event: {'song_id': 505, 'timestamp': 1742234073.3692539, 'region': 'US', 'action': 'play'}
Sent event: {'song_id': 303, 'timestamp': 1742234075.1747568, 'region': 'US', 'action': 'play'}
Sent event: {'song_id': 303, 'timestamp': 1742234076.042947, 'region': 'APAC', 'action': 'play'}
Sent event: {'song_id': 101, 'timestamp': 1742234077.1400948, 'region': 'EU', 'action': 'play'}
Sent event: {'song_id': 202, 'timestamp': 1742234078.6402242, 'region': 'EU', 'action': 'play'}
Sent event: {'song_id': 505, 'timestamp': 1742234080.4821062, 'region': 'APAC', 'action': 'play'}
Sent event: {'song_id': 505, 'timestamp': 1742234082.2036943, 'region': 'APAC', 'action': 'play'}
Sent event: {'song_id': 101, 'timestamp': 1742234083.373236, 'region': 'EU', 'action': 'play'}
Sent event: {'song_id': 303, 'timestamp': 1742234083.9143808, 'region': 'EU', 'action': 'play'}
Sent event: {'song_id': 202, 'timestamp': 1742234085.4482086, 'region': 'EU', 'action': 'play'}
Sent event: {'song_id': 101, 'timestamp': 1742234086.2850711, 'region': 'EU', 'action': 'play'}
Sent event: {'song_id': 505, 'timestamp': 1742234088.0675309, 'region': 'APAC', 'action': 'play'}
Sent event: {'song_id': 505, 'timestamp': 1742234089.8981714, 'region': 'US', 'action': 'play'}
Sent event: {'song_id': 202, 'timestamp': 1742234091.4271016, 'region': 'APAC', 'action': 'play'}
Sent event: {'song_id': 303, 'timestamp': 1742234092.1243782, 'region': 'APAC', 'action': 'play'}
Sent event: {'song_id': 404, 'timestamp': 1742234094.0455647, 'region': 'APAC', 'action': 'play'}
Sent event: {'song_id': 303, 'timestamp': 1742234095.5695074, 'region': 'EU', 'action': 'play'}
Sent event: {'song_id': 101, 'timestamp': 1742234097.1264455, 'region': 'US', 'action': 'play'}
Sent event: {'song_id': 202, 'timestamp': 1742234097.710197, 'region': 'US', 'action': 'play'}
Sent event: {'song_id': 404, 'timestamp': 1742234099.1736004, 'region': 'EU', 'action': 'play'}
Sent event: {'song_id': 505, 'timestamp': 1742234100.536399, 'region': 'US', 'action': 'play'}
Sent event: {'song_id': 303, 'timestamp': 1742234101.7234995, 'region': 'APAC', 'action': 'play'}
Sent event: {'song_id': 202, 'timestamp': 1742234103.5598462, 'region': 'EU', 'action': 'play'}
Sent event: {'song_id': 202, 'timestamp': 1742234104.536155, 'region': 'APAC', 'action': 'play'}
Sent event: {'song_id': 404, 'timestamp': 1742234105.3111763, 'region': 'APAC', 'action': 'play'}
Sent event: {'song_id': 505, 'timestamp': 1742234106.3241758, 'region': 'US', 'action': 'play'}
Sent event: {'song_id': 404, 'timestamp': 1742234107.521158, 'region': 'US', 'action': 'play'}
Sent event: {'song_id': 404, 'timestamp': 1742234108.3977184, 'region': 'EU', 'action': 'play'}
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ain123@ZainPC: /mnt/c/Users/ X   ain123@ZainPC: /mnt/c/Users/ X   ain123@ZainPC: /mnt/c/Users/ X   +   v
+-----+-----+-----+-----+
|window|region|song_id|count|rn|
+-----+-----+-----+-----+
|{2025-03-17 22:55:00, 2025-03-17 23:00:00}|EU|404|16|1|
|{2025-03-17 22:55:00, 2025-03-17 23:00:00}|EU|101|13|2|
|{2025-03-17 22:55:00, 2025-03-17 23:00:00}|APAC|303|11|1|
|{2025-03-17 22:55:00, 2025-03-17 23:00:00}|APAC|202|8|2|
|{2025-03-17 22:55:00, 2025-03-17 23:00:00}|APAC|505|6|3|
|{2025-03-17 22:55:00, 2025-03-17 23:00:00}|US|202|14|1|
+-----+-----+-----+-----+

=== Batch: 23 ===
+-----+-----+-----+-----+
|window|region|song_id|count|rn|
+-----+-----+-----+-----+
|{2025-03-17 22:55:00, 2025-03-17 23:00:00}|EU|404|17|1|
|{2025-03-17 22:55:00, 2025-03-17 23:00:00}|APAC|202|9|1|
|{2025-03-17 22:55:00, 2025-03-17 23:00:00}|APAC|505|7|2|
|{2025-03-17 22:55:00, 2025-03-17 23:00:00}|APAC|101|5|3|
|{2025-03-17 22:55:00, 2025-03-17 23:00:00}|US|404|16|1|
|{2025-03-17 22:55:00, 2025-03-17 23:00:00}|US|505|11|2|
+-----+-----+-----+-----+

=== Batch: 24 ===
+-----+-----+-----+-----+
|window|region|song_id|count|rn|
+-----+-----+-----+-----+
|{2025-03-17 22:55:00, 2025-03-17 23:00:00}|EU|303|12|1|
|{2025-03-17 22:55:00, 2025-03-17 23:00:00}|EU|505|11|2|
|{2025-03-17 22:55:00, 2025-03-17 23:00:00}|EU|202|10|3|
|{2025-03-17 22:55:00, 2025-03-17 23:00:00}|US|505|12|1|
|{2025-03-17 22:55:00, 2025-03-17 23:00:00}|US|101|9|2|
+-----+-----+-----+-----+
```

Changing processing window = 10 and action = skip:

window					region	song_id	count	rn
{2025-03-18 01:30:00, 2025-03-18 01:35:00}					APAC	101	1	1