

KaiOS operates an app store with a growing ecosystem of diverse apps. The store is a streaming data source that captures events triggered by explicit user action as well as technical events. For the purpose of this assignment, assume the raw store event data is available from *store\_events* table with the following schema:

Column name	Data type
<i>user_id</i>	<i>int</i>
<i>app_id</i>	<i>int</i>
<i>event_type</i>	<i>varchar(64)</i>
<i>event_time_utc</i>	<i>timestamp</i>

There are 6 event types:

- *store\_open*: the specified user has launched the app store client on the device
- *store\_app\_view*: the specified user has navigated to the app detail screen
- *store\_app\_download*: the specified user has downloaded the app package onto the device as part of either an initial app install or an update
- *store\_app\_install*: the specified user has performed an initial install of the specified app
- *store\_app\_update*: the specified user has performed an update of the specified app
- *store\_fetch\_manifest*: technical event generated by the store client that can be present at any point in the stream irrespective of explicit user action.

Early versions of the store client did not generate the *store\_app\_install* and the *store\_app\_update* events. Thus in those cases an actual app install has to be inferred from a *store\_app\_view* followed by a *store\_app\_download*. On the other hand, later versions of the store client have stopped producing the *store\_app\_download* event. A mixture of versions of the store client are active and output data into the event stream.

Assuming reliable event delivery, construct a single PostgreSQL statement producing the following aggregation:

Column name	Description
<i>app_id</i>	App id
<i>app_views</i>	Total count of app detail views for this app
<i>app_installs</i>	Total count of app installs for this app
<i>app_conversion_rate</i>	Total count of app installs / total app detail views for this app

*Deliver your solution as a .zip file containing a .sql file. Do not publish this assignment or your solution publicly as this will be unfair to others.*