

### Question 3 :

Do you know or familiar with term sessions in Analytics or Web / App ? This question is related to the technique of identifying users and later we will count them as our number in reporting. Explain more about sessions in Analytics, give 1 simple example for us or you have had experience using it in your previous company.

---

I am familiar with the term sessions in web app and I had experience using it in my previous company, but I have never used sessions in Analytics.

My experience using sessions in my previous company was to store user data (user\_id, name, role) when login to the web app, user data is validated and retrieved from the database. And this is different from term sessions in Analytics.

Screenshot of one of the codes :

---

```
<?php
include("koneksi.php");
include("function.php");
include("buildNav.php");

if ($_POST['mode'] == "login-process") {
    session_start();
    $result = mysql_query("SELECT * FROM idc_admin_user WHERE username = '".$_POST['mUsername']."'
AND password = '".md5($_POST['mPassword'])."'");
    if (mysql_num_rows($result) > 0) {
        $data = mysql_fetch_array($result);
        mysql_query("UPDATE idc_admin_user SET last_login = NOW() WHERE id = ".$data['id']);
        $_SESSION['login'.$appid] = $data['id'];
        $_SESSION['loginName'.$appid] = $data['name'];
        $_SESSION['role'.$appid] = $data['role_id'];
        echo "VALID";
    }
    else {
        echo "Wrong username or password !!!";
    }
}
```

## More explanation about sessions in Analytics :

### How does Google Analytics define a session?

#### Session

A session is a group of user interactions with your website or app that take place within a given time frame.

In Analytics, a session initiates when a user either opens your app in the foreground or views a page or screen and no session is currently active (e.g. their previous session has timed out).

By default, a session ends (times out) after 30 minutes of user inactivity. However, you can adjust the session timeout period. There is no limit to how long a session can last.

## Engaged session

An engaged session is a session that lasts longer than 10 seconds, has a conversion event, or has at least 2 pageviews or screenviews.

## What counts as a session

A session initiates when a user either:

- Opens your app in the foreground
- Views a page or screen and no session is currently active (e.g. their previous session has timed out)

By default, a session ends (times out) after 30 minutes of user inactivity. There is no limit to how long a session can last.

## How events are associated with a session ID and number

When a session starts, Google automatically collects a `session_start` event and generates a session ID (`ga_session_id`) and session number (`ga_session_number`) via the `session_start` event.

- Session ID identifies the session that an event came from. For example, two different session IDs are generated when a user has two separate sessions on your site.
- Session number identifies the number of sessions that a user has started up to the current session (e.g., a user's third or fifth session on your site).

Both the session ID and session number are associated with each event in a session automatically via `gtag.js` and the Google Analytics for Firebase SDK. However, the identifier is not included automatically in events from Measurement Protocol or Data Import.

Sometimes the session ID is not associated with the `session_start` event (e.g., when the event is filtered out from a subproperty). In these cases, Analytics still generates a session ID.

## Sessions vs. Users

Analytics measures both *sessions* and *users* in your account. *Sessions* represent the number of individual sessions initiated by all the users to your site. If a user is inactive on your site for 30 minutes or more, any future activity is attributed to a new session. Users that leave your site and return within 30 minutes are counted as part of the original session.

## How Count of Sessions is calculated and Example

Count of Sessions is displayed as a histogram in the Frequency and Recency report.

### At a glance

Values for the *Count of Sessions* dimension are displayed in a histogram with a range from 1-60. This histogram appears in the Frequency & Recency report.

### In dept

To understand how the *Count of Sessions* dimension works, it helps to first understand how sessions are counted in Analytics.

Each time a user initiates a session, a session counter increments for that user. For example, if User A comes to your site for the first time in January, that user's session count is 1. If the user returns in February, the session count is 2, and so on for each subsequent return.

If you view the Frequency & Recency report for the month of January, User A's session is included in the row for 1, indicating that there was 1 session from a first time user during the selected date range. If you view the Frequency & Recency report for the month of February, User A's session is included in the row for 2, indicating that there was 1 session during the selected date range from a 2nd-time user).

It's also possible that User A might initiate two sessions during the selected date range. In this case, the session is counted in each row that applies to the session count.

To illustrate this, look at this table that shows the session date and count for three users:

Date	Users	Counts
Jan	User A	1
	User B	2
Feb	User B	3
	User C	1
Mar	User A	2
	User B	4
	User C	2

If these were the the total number of users in your data for February, you would see the sessions distributed across the histogram as follows:

- 1 session: 1
- 2 sessions: 0
- 3 sessions: 1

If you viewed the same report for March, you would see the sessions distributed across the histogram as follows:

- 1 session: 0
- 2 sessions: 2
- 3 sessions: 0
- 4 sessions: 1

And if you viewed the same report for February and March, you would see the sessions distributed across the histogram as follows:

- 1 session: 1
- 2 sessions: 2
- 3 sessions: 1
- 4 sessions: 1

In this case, the total sessions are actually greater than the number of unique users because the Frequency & Recency report looks at sessions rather than unique users.