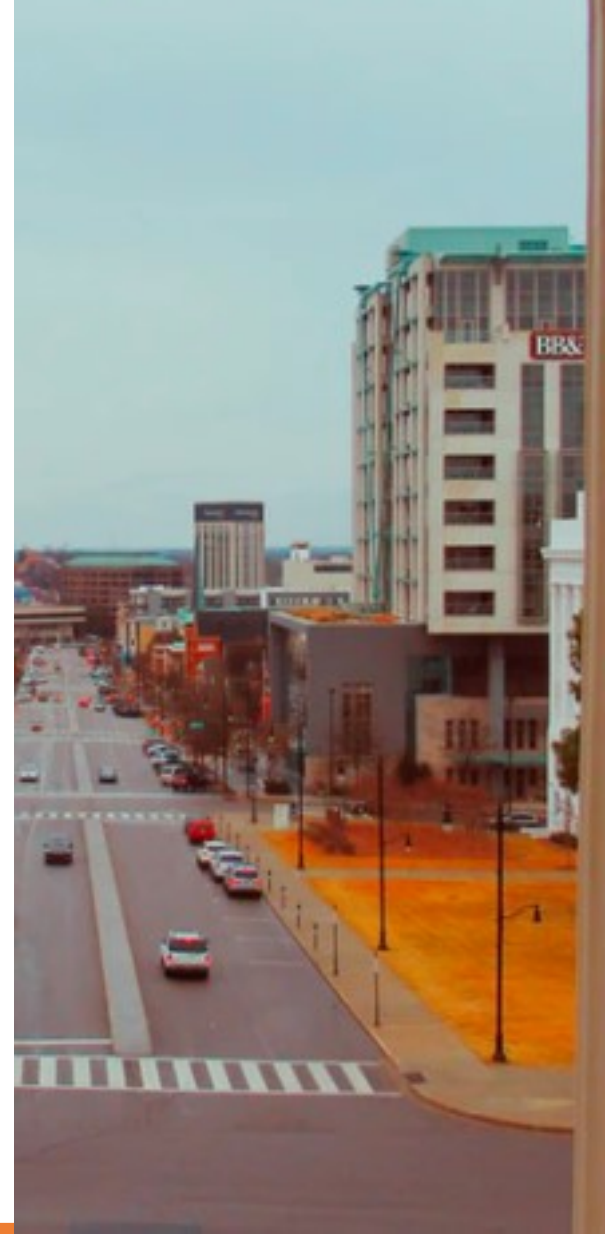


A hand is shown interacting with a tablet. The tablet screen displays a grid of application icons, including one labeled 'CUSTOM BUILT'. The background is dark and out of focus.

Session Windows

What is a Session

A period of activity followed by a defined gap of inactivity



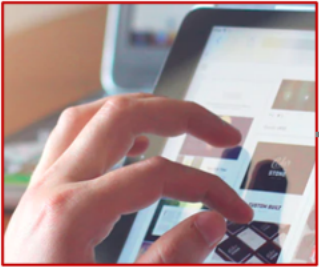
Session Window



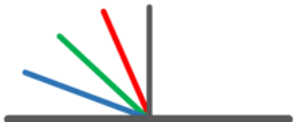
```
{ "UserID": "USR101",  
  "CreatedTime": "2019-02-05T10:01:00.00Z",  
  "CurrentLink": "NULL",  
  "NextLink": "Home" }
```



Session Window



```
USR101:{ "UserID": "USR101",  
  "CreateTime": "2019-02-05T10:01:00.00Z",  
  "CurrentLink": "NULL",  
  "NextLink": "Home" }
```

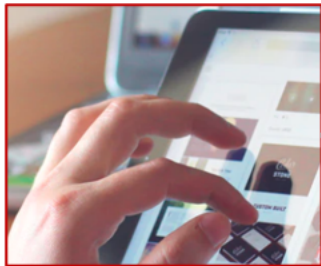


Session Window

Count the number of clicks per user session

(New session starts with the first click and it ends if a user is idle for five minutes)

```
USR101:{"UserID": "USR101","CreatedTime": "2019-02-05T10:01:00.00Z","CurrentLink": "NULL", "NextLink": "Home"}
USR102:{"UserID": "USR102","CreatedTime": "2019-02-05T10:02:00.00Z","CurrentLink": "NULL", "NextLink": "Home"}
USR101:{"UserID": "USR101","CreatedTime": "2019-02-05T10:04:00.00Z","CurrentLink": "Home", "NextLink": "Books"}
USR101:{"UserID": "USR101","CreatedTime": "2019-02-05T10:10:00.00Z","CurrentLink": "Books", "NextLink": "Kafka"}
USR102:{"UserID": "USR102","CreatedTime": "2019-02-05T10:10:00.00Z","CurrentLink": "Home", "NextLink": "Courses"}
USR101:{"UserID": "USR101","CreatedTime": "2019-02-05T10:07:00.00Z","CurrentLink": "Kafka", "NextLink": "Preview"}
USR101:{"UserID": "USR101","CreatedTime": "2019-02-05T10:19:00.00Z","CurrentLink": "Preview", "NextLink": "Buy"}
```



Session Windows

Session window end-time is continuously updated
as a new message arrives.

Summary

1. Session windows are varying in length.
2. Windows of different keys may have different start and end times.
3. Windows for the same key may also have different sizes.