# K-PACKED CACHE

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## GENERATING THE REQUESTS MATRIX:

- IMPORT DATASET:
  The first section import dataset is used to import the spotify and netflix dataset.
- For running the netflix dataset, the section NETFLIX DATASET, is used to generate the requests matrix.
- For running the spotify dataset, the section SPOTIFY DATASET VIRAL, is used to generate the requests matrix.
- For generating new dataset (synthetic), the section GEN DATASET - SWEE is used.

## NO PACKING:

- Run the NO PACKING section.

```
no_packing(expiry)
```

## TWO PACKING:

- Run the K POINTS PACKING section and the ONLINE K PACKING section, with the max_clique_size parameter set to 2, for two packing offline and online respectively.

```
k_packing(threshold, alpha, expiry, 2)    # offline
online_k_packing(batch_size, threshold, alpha, expiry, 2)   # online
```

## K PACKING OFFLINE:

- Run the K POINTS PACKING section.

```
k_packing(threshold, alpha, expiry, max_clique_size)
```

## K PACKING ONLINE:

- Run the ONLINE K PACKING section.
- `online_k_packing(batch_size, threshold, alpha, expiry, max_clique_size)`

*NOTE: For setting any hyperparameters we run the cell in the IMPORT DATASET section.*

# GENERATING RESULTS:

- For generating any results in the graph format, the section GRAPH PLOTTING is used.
- Different subsections are formed for different hyperparameters graph plotting.
- Running the respective subsections will generate the graphs.
- The generated results are stored in comments in the respective subsections as well.

The link for the google collab notebook for the code is as follows:

Sweeya_Aadarsh_K-PackCache_BTP_GoogleCollab.ipynb
Overleaf BTP Report
Overleaf IEEE format
Sweeya_Aadarsh_BTP_Presentation