

# SALES RECAPITULATION ANALYSIS REPORT

Sabtu, 16 Maret 2024

## Preprocessing Data

Preprocessing Data dengan menghapus kolom yang mempunyai unique value 1, dan mengubah nilai numerik yang masih dianggap object (kolom currency).

```
df_sales = pd.read_csv('data/sales_recapitulation_data.csv', encoding='ISO-8859-1', low_memory=False)
df_sales = df_sales.loc[:, df_sales.apply(pd.Series.nunique) != 1]
df_sales.drop(columns=['Area', 'Custom Menu Name', 'Menu Code'], inplace=True)
df_sales['Price'] = df_sales['Price'].str.replace(',', '').astype(float)
df_sales['Subtotal'] = df_sales['Subtotal'].str.replace(',', '').astype(float)
df_sales['Discount'] = df_sales['Discount'].str.replace(',', '').astype(float)
df_sales['Service Charge'] = df_sales['Service Charge'].str.replace(',', '').astype(float)
df_sales['Tax'] = df_sales['Tax'].str.replace(',', '').astype(float)
df_sales['Total'] = df_sales['Total'].str.replace(',', '').astype(float)
df_sales['Nett Sales'] = df_sales['Nett Sales'].str.replace(',', '').astype(float)
df_sales['Bill Discount'] = df_sales['Bill Discount'].str.replace(',', '').astype(float)
df_sales['Total After Bill Discount'] = df_sales['Total After Bill Discount'].str.replace(',', '').astype(float)
df_sales.head()
```

| Sales Number        | Bill Number      | Batch Order | Table Section | Table Name | Sales Date In       | Sales Date Out      | Visit Purpose | Regular Member Code | Regular Member Name | Customer Name | Payment Method |
|---------------------|------------------|-------------|---------------|------------|---------------------|---------------------|---------------|---------------------|---------------------|---------------|----------------|
| 0 SLF01165276726041 | LF01202205170006 | 1           | INDOOR        | Folks 2    | 2022-05-17 13:01:00 | 2022-05-17 14:31:06 | DINE IN       | Non Member          | Non Member          | -             | CASH           |

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 111905 entries, 0 to 111904
Data columns (total 29 columns):
#   Column                                Non-Null Count  Dtype
---  ---                                -
0   Sales Number                          111905 non-null object
1   Bill Number                           111905 non-null object
2   Batch Order                           111905 non-null int64
3   Table Section                          111905 non-null object
4   Table Name                            111905 non-null object
5   Sales Date In                          111905 non-null object
6   Sales Date Out                         111905 non-null object
7   Visit Purpose                          111905 non-null object
8   Regular Member Code                    111905 non-null object
9   Regular Member Name                    111905 non-null object
10  Customer Name                          111905 non-null object
11  Payment Method                         111905 non-null object
12  Menu Category                          111905 non-null object
13  Menu Category Detail                   111905 non-null object
14  Menu                                   111905 non-null object
15  Menu Notes                             14597 non-null  object
16  Order Mode                             111905 non-null object
17  Qty                                    111905 non-null int64
18  Price                                  111905 non-null float64
19  Subtotal                               111905 non-null float64
...
27  Waiter                                107682 non-null object
28  Order Time                             111905 non-null object
dtypes: float64(9), int64(2), object(18)
```

## Preprocessing Data Time Series

Preprocessing data untuk Time Series, menjumlahkan Customer tiap harinya, lalu menentukan apakah di tanggal tersebut Weekend, Libur Bersama, dan Libur Nasional dengan asumsi Weekend dan hari besar ini memiliki pengaruh dalam jumlah Customer. Selain itu dilakukan juga normalisasi MinMaxScaler, pelanggan paling sedikit adalah 7 dan paling banyak 84.

```
def check_missing_dates(df, column_name):
    min_date = df[column_name].min() # Menentukan tanggal terkecil
    max_date = df[column_name].max() # Menentukan tanggal terbesar

    date_range = [min_date + timedelta(days=x) for x in range((max_date - min_date).days + 1)] # Rentang tanggal

    temp_tanggal = df[column_name].values
    # Find missing dates
    missing_dates = [date for date in date_range if date not in temp_tanggal]

    # Print missing dates
    if missing_dates:
        print("Missing dates:")
        for date in missing_dates:
            print(date.strftime("%d/%m/%Y"))
    else:
        print("No missing dates found.")

def fill_missing_dates(df, column_name, fill_columns): # Untuk mengisi nilai kosong pada dataframe
    # df[column_name] = pd.to_datetime(df[column_name], format="%d/%m/%Y", dayfirst=True) # Mengubah format kolom column_name menjadi format tanggal, karena bisa saja kolom t
    df = df.set_index(column_name) # Mengubah index dataframe menjadi tanggal, hal ini digunakan karena ada fungsi bernama 'interpolate' pada pandas hanya bisa membaca index
    # Generate a date range from the minimum to maximum date in the column_name column
    min_date = df.index.min() # Menentukan tanggal terkecil (oldest)
    max_date = df.index.max() # Menentukan tanggal terbesar (newest)
    date_range = pd.date_range(start=min_date, end=max_date) # Menentukan rentang tanggal dari terkecil hingga terbesar

    df = df.reindex(date_range) # Menambahkan data berisikan Null (data kosong) ke dataframe yang tidak memuat tanggal pada data_range (tanggal yang kosong)
    for fill_column in fill_columns:
        df[fill_column] = df[fill_column].interpolate(method='linear') # Mengisi nilai yang Null tadi dengan interpolate menggunakan metode 'linear', artinya data diisi dengan
    df = df.reset_index() # Mengembalikan tanggal yang tadinya sebagai index kembali menjadi kolom, namun nama kolomnya akan menjadi 'index' bukan column_name
    df = df.rename(columns={'index': column_name}) # Mengubah nama kolom 'index' kembali menjadi 'tanggal'

    return df
```

### Source Code untuk Mengisi Tanggal yang Kosong

|   | A          | B              | C                                   | D         |
|---|------------|----------------|-------------------------------------|-----------|
| 1 | Dates      | Status         | Description                         | Group     |
| 2 | 01/01/2018 | Public Holiday | New Year 2018 AD                    | National  |
| 3 | 16/02/2018 | Public Holiday | Chinese New Year 2569 Kongzili      | Chinese   |
| 4 | 17/03/2018 | Public Holiday | Nyepi Day Saka New Year 1940        | Hindu     |
| 5 | 30/03/2018 | Public Holiday | Good Friday                         | Christian |
| 5 | 14/04/2018 | Public Holiday | Isra Mi'raj Prophet Muhammad S.A.W. | Islamic   |
| 7 | 01/05/2018 | Public Holiday | International Labor Day             | National  |
| 8 | 10/05/2018 | Public Holiday | Ascension Day of Jesus              | Christian |
| 9 | 29/05/2018 | Public Holiday | Vesak Day 2562                      | Buddha    |
| 0 | 01/06/2018 | Public Holiday | Pancasila birthday                  | National  |
| 1 | 11/06/2018 | Joint Holiday  | Eid Al-Fitr 1439 Hijriyah           | Islamic   |
| 2 | 12/06/2018 | Joint Holiday  | Eid Al-Fitr 1439 Hijriyah           | Islamic   |
| 3 | 13/06/2018 | Joint Holiday  | Eid Al-Fitr 1439 Hijriyah           | Islamic   |
| 4 | 14/06/2018 | Joint Holiday  | Eid Al-Fitr 1439 Hijriyah           | Islamic   |
| 5 | 15/06/2018 | Public Holiday | Eid Al-Fitr 1439 Hijriyah           | Islamic   |
| 6 | 16/06/2018 | Public Holiday | Eid Al-Fitr 1439 Hijriyah           | Islamic   |
| 7 | 18/06/2018 | Joint Holiday  | Eid Al-Fitr 1439 Hijriyah           | Islamic   |

### Dataset Libur Nasional

```
def min_max_normalize_dataframe(df, columns): # Untuk normalisasi dataframe
    # Create a MinMaxScaler object
    scaler = MinMaxScaler()

    # Fit the scaler on the specified columns
    scaler.fit(df[columns])

    # Apply min-max normalization to the specified columns
    df[columns] = scaler.transform(df[columns])

    return df, scaler

def denormalize_dataframe(df, columns, scaler): # Untuk mengembalikan dataframe ke bentuk semula sebelum normalisasi
    # Inverse transform the specified columns
    df[columns] = scaler.inverse_transform(df[columns])

    return df
```

Code untuk Normalisasi dan Denormalisasi

|   | Order Date | Customer Count | is_weekend | Joint Holiday | Public Holiday |
|---|------------|----------------|------------|---------------|----------------|
| 0 | 2022-05-17 | 0.259740       | 0          | 0             | 0              |
| 1 | 2022-05-18 | 0.376623       | 0          | 0             | 0              |
| 2 | 2022-05-19 | 0.311688       | 0          | 0             | 0              |
| 3 | 2022-05-20 | 0.324675       | 0          | 0             | 0              |
| 4 | 2022-05-21 | 0.467532       | 1          | 0             | 0              |

Hasil Data Bersih

## Model LSTM untuk Prediksi

Model LSTM:

```
data_input, data_input2, data_output = make_dataset(  
    df_sales_timeseries_holiday,  
    df_sales_timeseries_holiday.columns[1:],  
    ['Customer Count'],  
    input_timesteps=180,  
    output_timesteps=365,  
    event=1  
)  
✓ 0.2s  
Input shape: (110, 180, 1)  
Input2 shape: (110, 545, 12)  
Output shape: (110, 365, 1)
```

## Input dan Output Data untuk LSTM

Model: "model\_5"

| Layer (type)                 | Output Shape      | Param # | Connected to                         |
|------------------------------|-------------------|---------|--------------------------------------|
| input_8 (InputLayer)         | [(None, 180, 1)]  | 0       | []                                   |
| flatten (Flatten)            | (None, 180)       | 0       | ['input_8[0][0]']                    |
| dense_6 (Dense)              | (None, 545)       | 98645   | ['flatten[0][0]']                    |
| input_9 (InputLayer)         | [(None, 545, 12)] | 0       | []                                   |
| reshape_4 (Reshape)          | (None, 545, 1)    | 0       | ['dense_6[0][0]']                    |
| model_4 (Functional)         | (None, 545, 12)   | 3600    | ['input_9[0][0]']                    |
| concatenate_2 (Concatenate ) | (None, 545, 13)   | 0       | ['reshape_4[0][0]', 'model_4[0][0]'] |
| lstm_11 (LSTM)               | (None, 545, 64)   | 19968   | ['concatenate_2[0][0]']              |
| lstm_12 (LSTM)               | (None, 545, 64)   | 33024   | ['lstm_11[0][0]']                    |
| dropout_9 (Dropout)          | (None, 545, 64)   | 0       | ['lstm_12[0][0]']                    |
| lstm_13 (LSTM)               | (None, 256)       | 328704  | ['dropout_9[0][0]']                  |
| dropout_10 (Dropout)         | (None, 256)       | 0       | ['lstm_13[0][0]']                    |
| dense_7 (Dense)              | (None, 365)       | 93805   | ['dropout_10[0][0]']                 |
| dropout_11 (Dropout)         | (None, 365)       | 0       | ['dense_7[0][0]']                    |
| dense_8 (Dense)              | (None, 365)       | 133590  | ['dropout_11[0][0]']                 |
| reshape_5 (Reshape)          | (None, 365, 1)    | 0       | ['dense_8[0][0]']                    |

=====  
Total params: 711336 (2.71 MB)  
Trainable params: 711336 (2.71 MB)  
Non-trainable params: 0 (0.00 Byte)

## Arsitektur LSTM

### Konfigurasi Model:

Optimizer: ADAM

Loss: MSE

Epochs: 300

Validation Split: 20%

### Hasil Training LSTM:



**Train Loss (MSE):** 0.0049

**Validation Loss (MSE):** 0.0244

**Waktu Komputasi:** 38.6 Menit

## Model ARIMAX untuk Prediksi

Model ARIMAX juga dilatih dengan dependensi fitur-fitur seperti Weekend, Joint Holiday, dan Public Holiday.

```
# Predicting next day's values
forecast = model_fit.forecast(steps=131, exog=exog_test) # Forecast 131 days

# Calculating Mean Squared Error (MSE)
mse = mean_squared_error(endog_test, forecast)
print('Mean Squared Error (MSE):', mse)
```

✓ 0.4s

Mean Squared Error (MSE): 0.02763128677129224

## Kalkulasi MSE untuk Data Tes ARIMAX

```
iv. ARIMA Modelling

from statsmodels.tsa.arima.model import ARIMA
from sklearn.model_selection import train_test_split
from sklearn.metrics import mean_squared_error

[69] ✓ 0.0s Python

ARIMA_data = df_sales_timeseries.iloc[:, 1:3].values
ARIMA_data.shape

[82] ✓ 0.0s Python

... (654, 2)

# Splitting the data into train and test sets
train_size = int(len(ARIMA_data) * 0.8)
train_data, test_data = ARIMA_data[:train_size], ARIMA_data[train_size:]

# Extracting the dependent and exogenous variables
endog_train = train_data[:, 0] # Assuming the first column is the dependent variable
exog_train = train_data[:, 1].reshape(-1, 1) # Reshape to (131, 1)
```

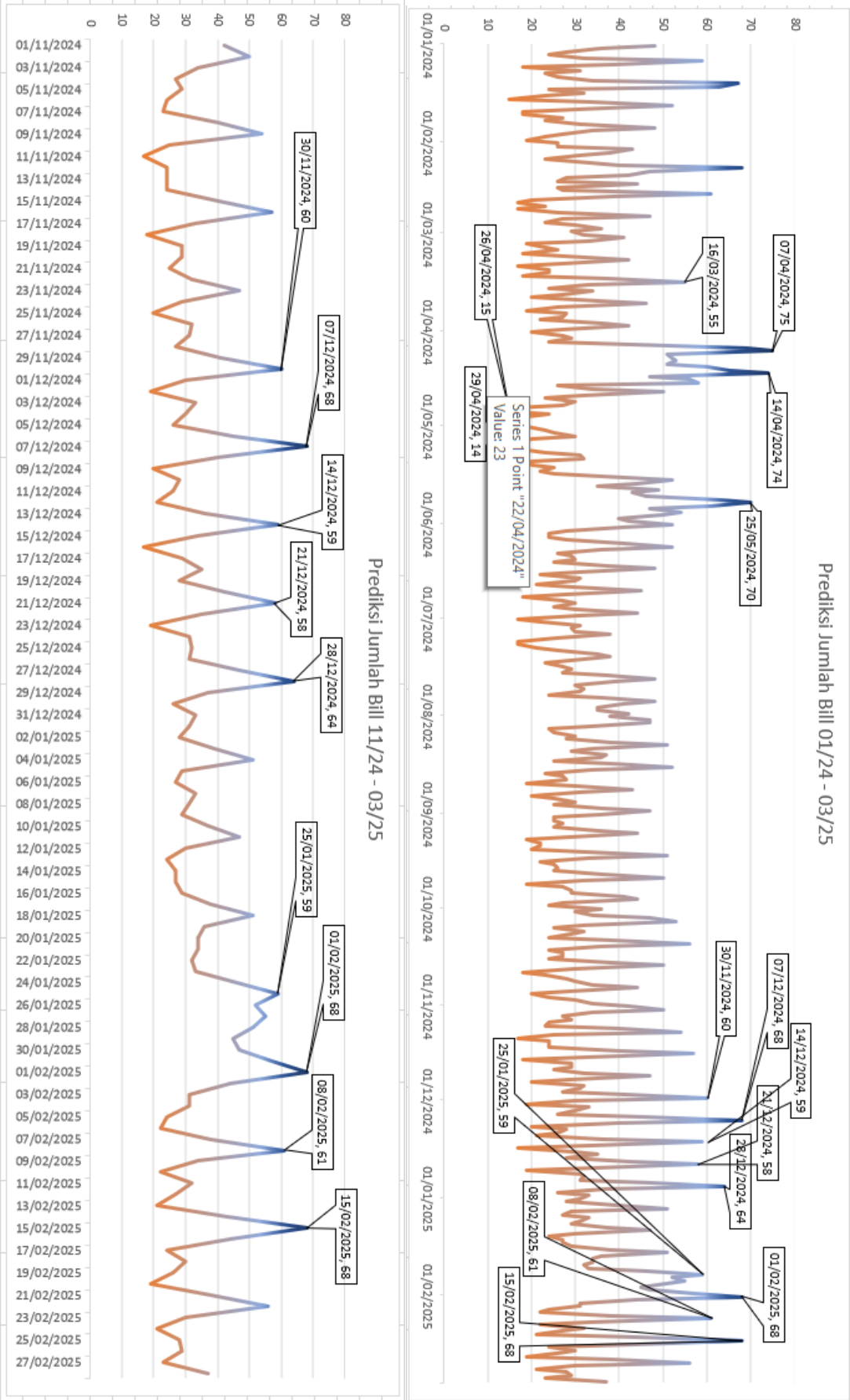
## ARIMAX Code

Model ARIMAX mendapatkan MSE sebagai berikut:

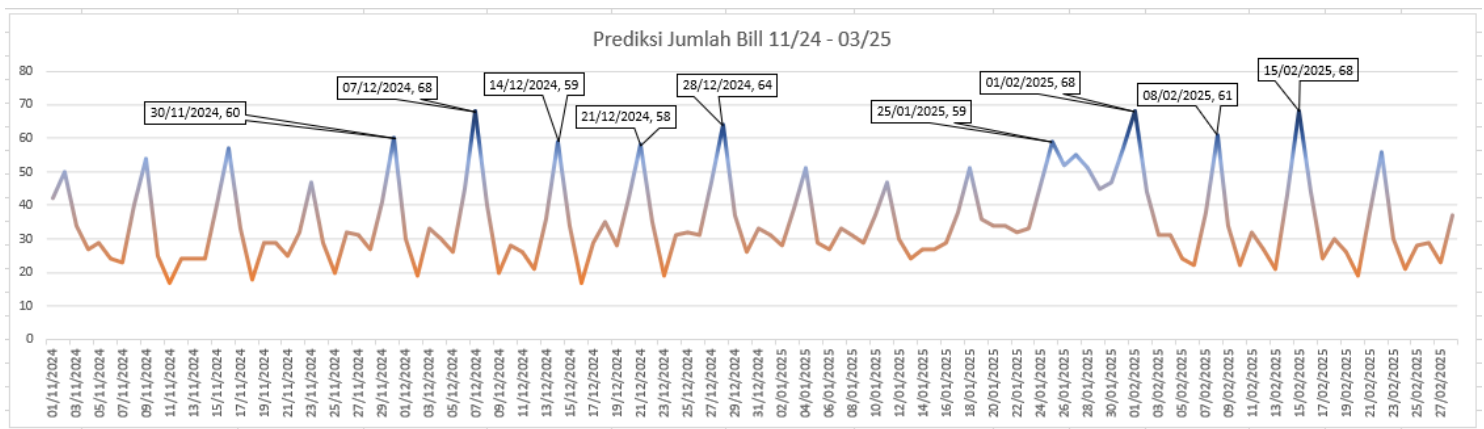
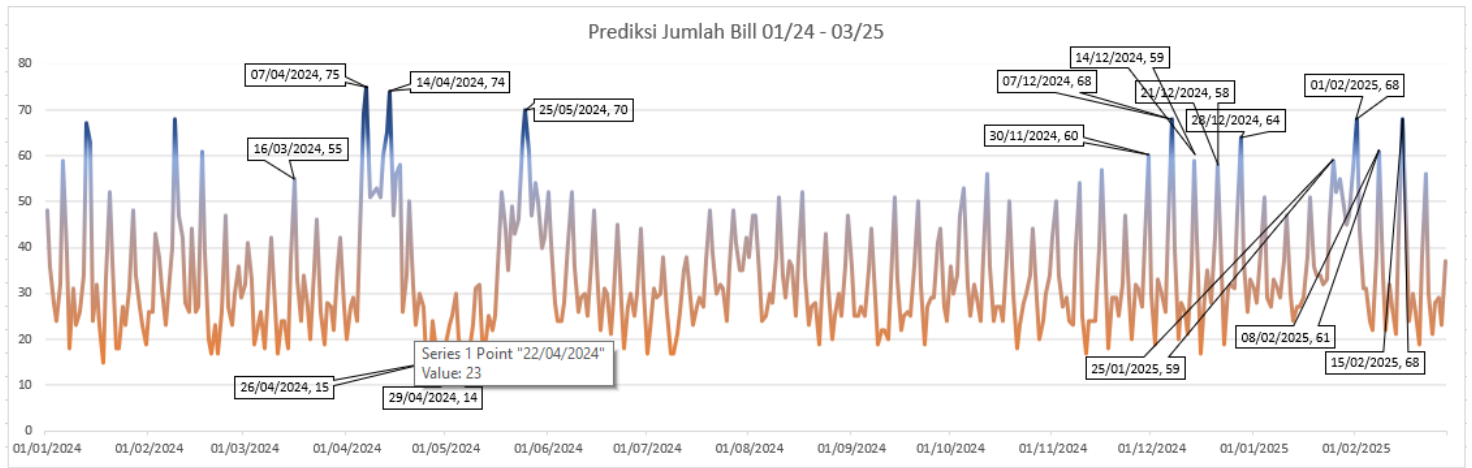
**Validation Loss (MSE): 0.02763128677129224**

Model terbaik adalah model dengan **Validation Loss** terkecil, sehingga model **LSTM** dipilih sebagai model untuk prediksi

Prediksi Jumlah Bill 03/24 – 03/25 (Vertical)



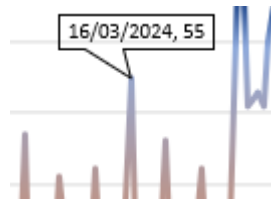
## Prediksi Jumlah Bill 03/24 – 03/25 (Horizontal)





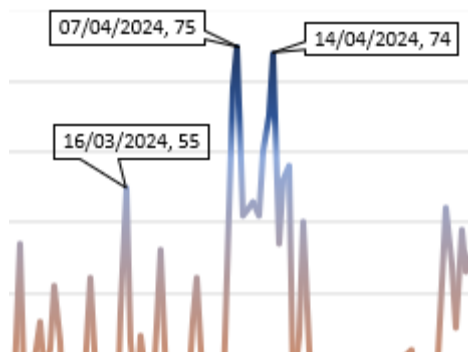
## Penjelasan Tambahan pada Prediksi

**Sabtu, 16 Maret 2024:**



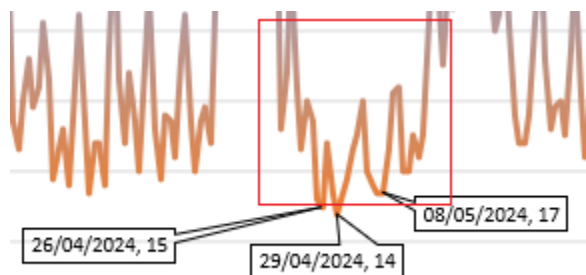
Hari Weekend Biasa, namun diprediksi lebih banyak Customer daripada Weekend yang lain yaitu sebanyak 55 Bill

**Sabtu, 6 April 2024 hingga Rabu, 17 April 2024:**



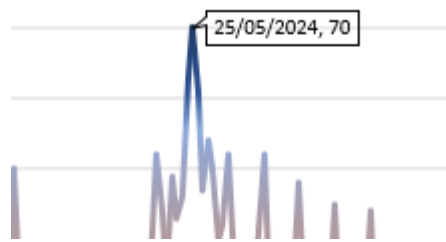
Hari Raya Idul Fitri diprediksi akan menaikkan jumlah Customer dari **Sabtu, 6 April 2024** hingga **Rabu, 17 April 2024**, dimana puncaknya terlihat pada **Minggu, 7 April 2024** dan **Minggu, 14 April 2024**.

**Senin, 22 April 2024 hingga Rabu, 15 Mei 2024:**



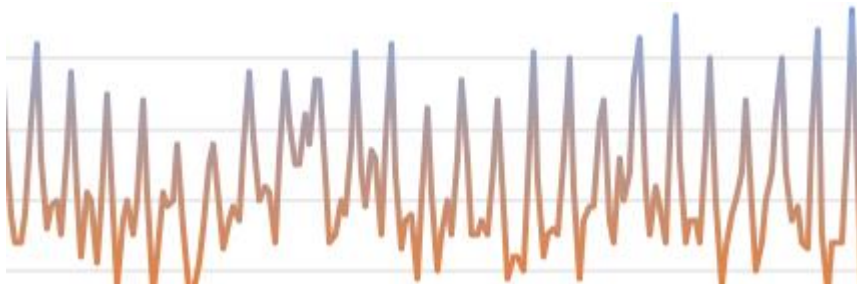
Diprediksi akan mengalami penurunan Customer baik pada Weekday maupun Weekend. Customer pada Weekend diprediksi akan tidak sebanyak biasanya. Customer terendah diprediksi ada pada **Senin, 29 April 2024** yaitu sebanyak 14 jumlah Bill. Selain itu juga terdapat pada **Jumat, 26 April 2024** sebanyak 15 Bill, dan **Rabu, 8 Mei 2024** sebanyak 17 Bill.

### Sabtu, 25 Mei 2024:



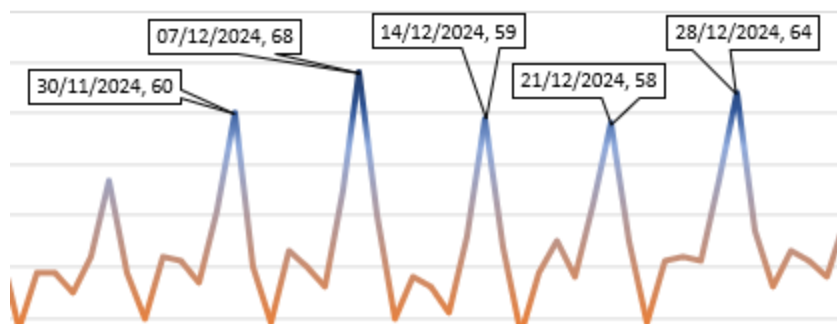
Setelah mengalami penurunan, berikutnya diprediksi bahwa trend akan naik pada **Sabtu, 18 Mei 2024** sebanyak 52 Bill, dan berada pada puncak pada **Sabtu, 25 Mei 2024** sebanyak 70 Bill. Dapat diperhatikan bahwa pada **Kamis, 23 Mei 2024** dan **Jumat, 24 Mei 2024** adalah Hari Raya Waisak, sehingga terdapat 4 Hari Libur berturut-turut (dari Kamis hingga Minggu), maka dapat diasumsikan bahwa inilah penyebab kenaikan jumlah Customer.

### Juni 2024 hingga Oktober 2024:



Jumlah Customer dari bulan Juni 2024 hingga bulan Oktober 2024 diprediksi akan stagnan, kenaikan Customer hanya terjadi pada Weekend, sedangkan penurunan cenderung pada Weekday terutama hari Senin.

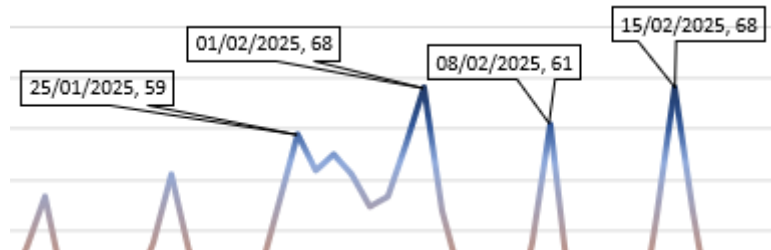
### Sabtu, 30 November 2024 hingga Awal 2025:



Kenaikan jumlah Customer dilihat dari trend tahunan dimulai dari bulan November hingga tahun baru. terlihat berturut-turut kenaikan Customer terjadi pada hari Sabtu dari **Sabtu, 30 November 2024** hingga **Sabtu, 28 Desember 2024**. Namun dari prediksi terlihat bahwa hari Raya Natal 2024 pada **Rabu, 25 Desember 2024** tidak diprediksi mengalami kenaikan, sementara menurut trend 2022 dan 2023, jumlah Customer pada Hari Raya Natal selalu berada di 25% teratas, kemungkinan besar penyebabnya adalah jangkauan prediksinya sudah terlalu

lama dari data yang diketahui, sehingga alangkah baiknya tetap diasumsikan bahwa **Rabu, 25 Desember 2024** hingga **Awal Tahun 2025** mengalami kenaikan Customer.

**Sabtu, 25 Januari 2025 hingga Sabtu, 15 Februari 2025:**



Prediksi pada Bulan Januari 2025 mengalami trend kenaikan Customer, dimulai dari **Sabtu, 25 Januari 2025** sebanyak 59 Bill, puncaknya **Sabtu, 1 Februari 2025** sebanyak 68 Bill, lalu **Sabtu, 8 Februari 2025** sebanyak 61 Bill. Menariknya Hari Valentine pada **Jumat, 14 Februari 2025** justru tidak begitu memuncak, yaitu sebanyak 43 Bill (masih di 25% teratas). Namun, Customer memuncak pada **Sabtu, 15 Februari 2025**, hal ini dapat diasumsikan bahwa Customer lebih memilih untuk pergi pada hari Sabtu yang mendekati Valentine daripada tepat pada Hari Valentine tersebut.

### **Clustering Jumlah Customer:**

**Customer Paling Sedikit:** 7 Bill

**Tingkat Customer Rendah (Q1):** Kurang dari 23 Bill/hari

**Tingkat Customer Normal (Q2):** Antara 23 hingga 37 Bill/hari

**Tingkat Customer Tinggi (Q3):** Lebih dari 37 Bill/hari

**Customer Paling Banyak:** 84 Bill

### **Catatan Tambahan:**

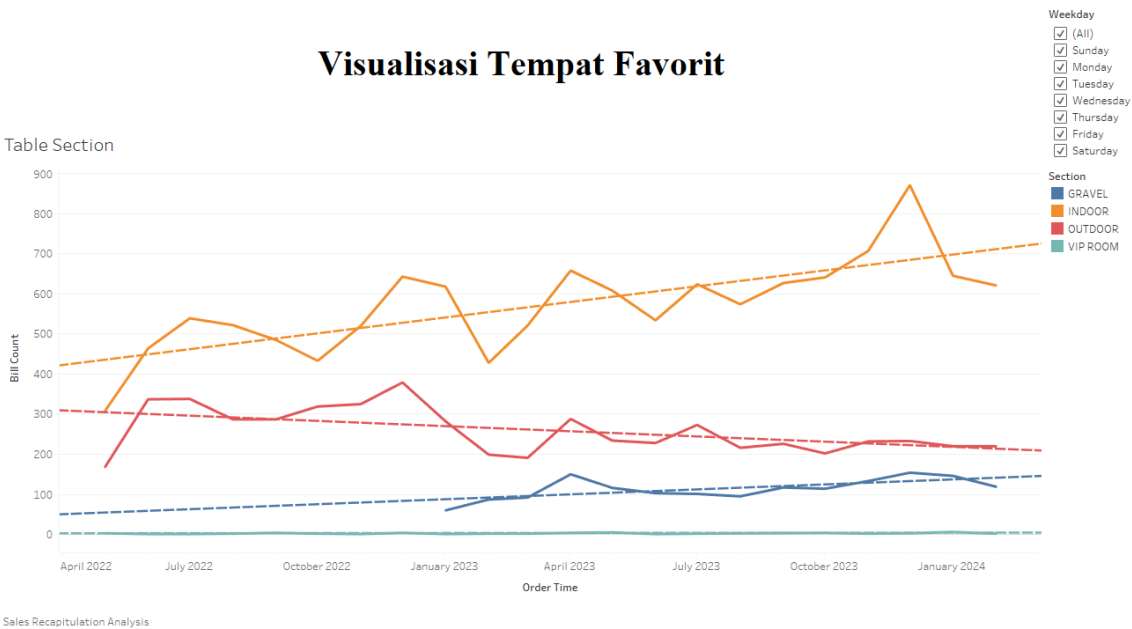
Data yang digunakan dalam analisis adalah Jumlah Bill, Jumlah Customer riil yang akan datang dapat disesuaikan dari prediksi Jumlah Bill (semisal 1 Bill rata-rata 3 Customer), dikarenakan jumlah Customer secara spesifik tidak dapat diketahui dari Dataset.

Model yang digunakan untuk prediksi ini memiliki **Validation Loss 0.0244**, yaitu memiliki rata-rata kesalahan sebanyak **12 jumlah Bill**, sehingga ekspektasi kesalahan setiap data dapat berbeda 12 jumlah Bill dari prediksi (kurang maupun lebih).

Kelemahan Prediksi berbasis waktu (Time Series) adalah semakin tidak akurat seiring berjalannya waktu, sehingga kesalahan dapat meningkat seiring lebih lama jangka prediksi.

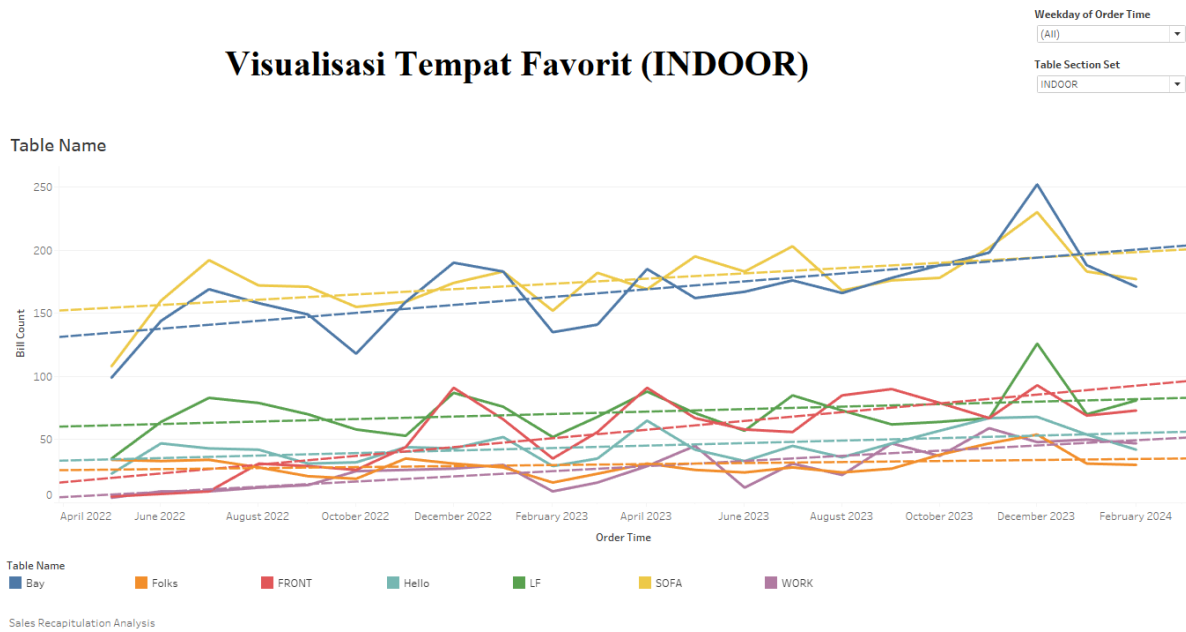
## Tempat Favorit Customer Setiap Section

### Visualisasi Tempat Favorit

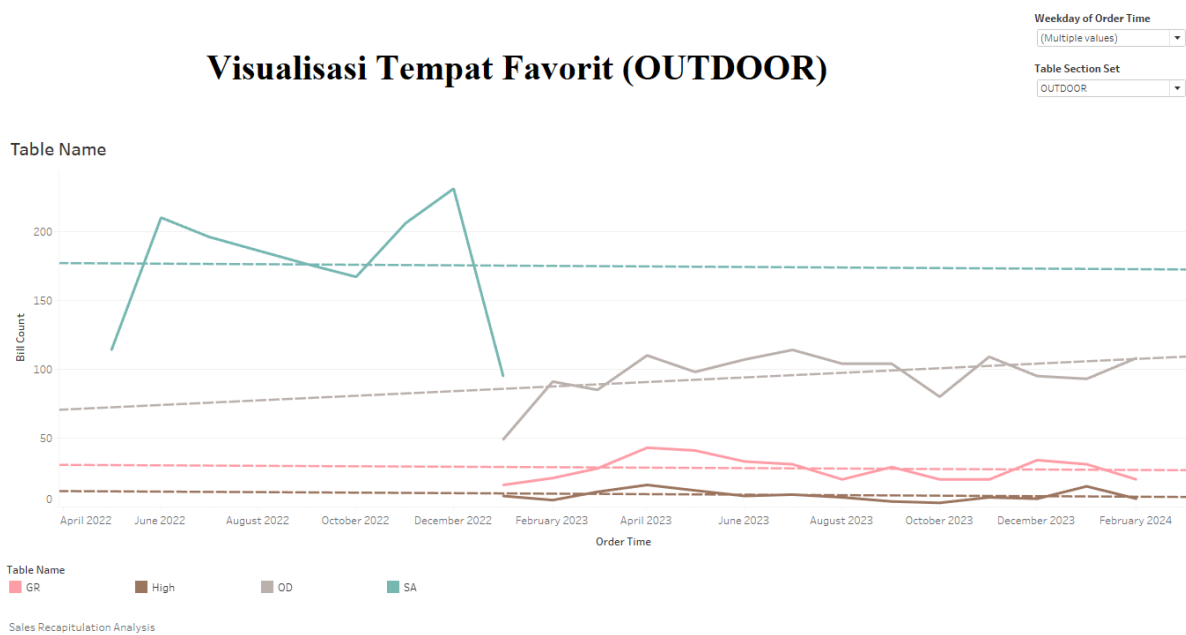


Dapat dilihat bahwa Section terfavorit adalah Section Indoor, diikuti oleh Outdoor, Gravel, lalu VIP Room. Tren menunjukkan bahwa Section Indoor, Gravel, dan VIP Room mengalami kenaikan seiring waktu, sedangkan Section Outdoor mengalami penurunan. Dapat disimpulkan bahwa perlahan pelanggan mulai berpindah tempat dari Outdoor menuju Indoor atau Gravel.

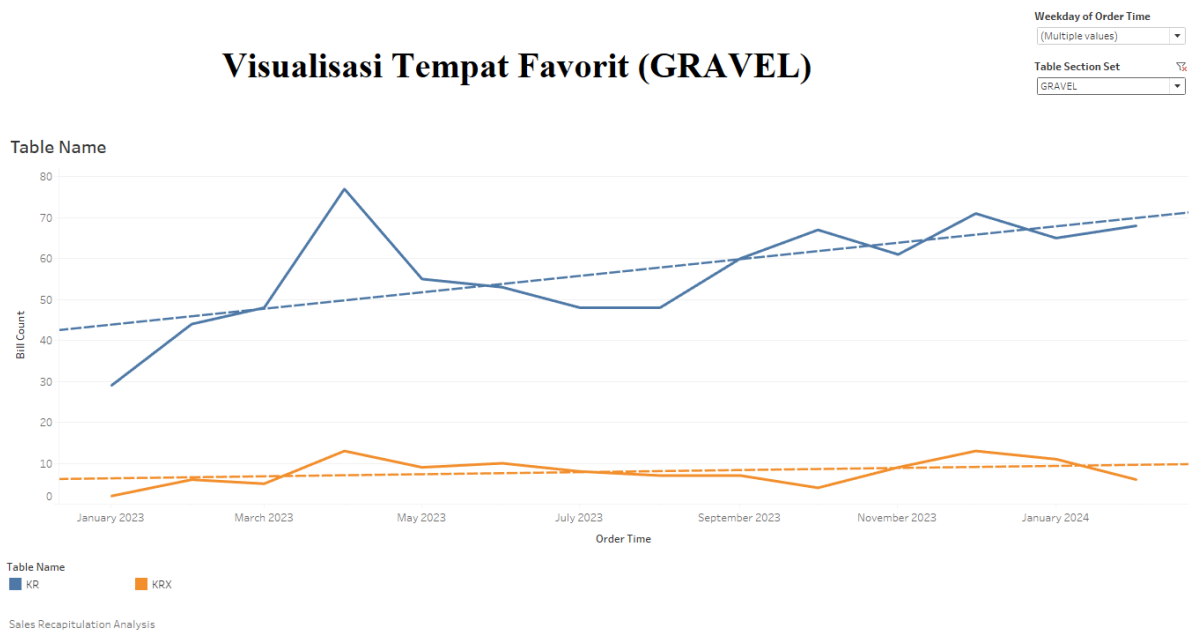
## Tempat Favorit Customer Setiap Nama Meja



Pada Section Indoor, terlihat bahwa meja Bay dan Folks menjadi favorit para Customer, diikuti oleh LF, Hello, Folks, dan SOFA. Sedangkan semua meja menunjukkan tren naik, dimana tren naik terbesar ditunjukkan oleh FRONT dan tren naik terkecil ditunjukkan oleh Folks.



Untuk Section Outdoor, sepertinya nama meja SA hanya digunakan sampai akhir 2022, selanjutnya dipisah sebagai GR, High, dan OD. Maka dari itu tempat favorit untuk Section Outdoor ditunjukkan oleh meja OD dengan tren naik dibanding dengan GR dan High dengan tren turun, dimana meja paling tidak favorit adalah meja High.



Sedangkan pada Section Gravel, meja yang paling disukai adalah KR dan meja yang kurang disukai adalah KRX. Tren menunjukkan KR mengalami kenaikan seiring waktu dan KRX mengalami penurunan.

### Pasangan Menu Favorit berdasarkan Hari

Berikut adalah pasangan Menu Favorit berdasarkan hari, data diambil dari Maret 2022 hingga Maret 2024.

#### Menu Category (1 Pasang)

| Menu            | Jumlah Bill |
|-----------------|-------------|
| ['COLD DRINKS'] | 1866        |
| ['FOOD']        | 1407        |
| ['SHARE']       | 883         |
| ['HOT DRINKS']  | 874         |
| ['DESSERT']     | 346         |

Tabel 1.1: Menu Category Favorit 1 Pasang pada Hari Senin

| Menu            | Jumlah Bill |
|-----------------|-------------|
| ['COLD DRINKS'] | 2044        |
| ['FOOD']        | 1515        |
| ['SHARE']       | 936         |
| ['HOT DRINKS']  | 904         |
| ['DESSERT']     | 355         |

Tabel 1.2: Menu Category Favorit 1 Pasang pada Hari Selasa

| Menu            | Jumlah Bill |
|-----------------|-------------|
| ['COLD DRINKS'] | 2162        |
| ['FOOD']        | 1673        |
| ['SHARE']       | 1047        |
| ['HOT DRINKS']  | 963         |
| ['DESSERT']     | 413         |

Tabel 1.3: Menu Category Favorit 1 Pasang pada Hari Rabu

| Menu            | Jumlah Bill |
|-----------------|-------------|
| ['COLD DRINKS'] | 1996        |
| ['FOOD']        | 1546        |
| ['SHARE']       | 979         |
| ['HOT DRINKS']  | 943         |
| ['DESSERT']     | 357         |

Tabel 1.4: Menu Category Favorit 1 Pasang pada Hari Kamis

| Menu            | Jumlah Bill |
|-----------------|-------------|
| ['COLD DRINKS'] | 2590        |
| ['FOOD']        | 1984        |
| ['SHARE']       | 1293        |
| ['HOT DRINKS']  | 1178        |
| ['DESSERT']     | 540         |

Tabel 1.5: Menu Category Favorit 1 Pasang pada Hari Jumat

| Menu            | Jumlah Bill |
|-----------------|-------------|
| ['COLD DRINKS'] | 3896        |
| ['FOOD']        | 2865        |
| ['SHARE']       | 2027        |
| ['HOT DRINKS']  | 1733        |
| ['DESSERT']     | 853         |

Tabel 1.6: Menu Category Favorit 1 Pasang pada Hari Sabtu

| Menu            | Jumlah Bill |
|-----------------|-------------|
| ['COLD DRINKS'] | 2992        |
| ['FOOD']        | 2258        |
| ['SHARE']       | 1526        |
| ['HOT DRINKS']  | 1313        |
| ['DESSERT']     | 654         |

Tabel 1.7: Menu Category Favorit 1 Pasang pada Hari Minggu

| Hari   | Menu            | Jumlah Bill |
|--------|-----------------|-------------|
| Senin  | ['COLD DRINKS'] | 1866        |
| Selasa | ['COLD DRINKS'] | 2044        |
| Rabu   | ['COLD DRINKS'] | 2162        |
| Kamis  | ['COLD DRINKS'] | 1966        |
| Jumat  | ['COLD DRINKS'] | 2590        |
| Sabtu  | ['COLD DRINKS'] | 3896        |
| Minggu | ['COLD DRINKS'] | 2992        |

Tabel 1.8: Menu Category Paling Favorit 1 Pasang berdasarkan Hari



### Menu Category (2 Pasang)

| Menu                          | Jumlah Bill |
|-------------------------------|-------------|
| ['COLD DRINKS', 'FOOD']       | 1208        |
| ['COLD DRINKS', 'SHARE']      | 799         |
| ['COLD DRINKS', 'HOT DRINKS'] | 683         |
| ['FOOD', 'HOT DRINKS']        | 585         |
| ['FOOD', 'SHARE']             | 541         |

Tabel 2.1: Menu Category Favorit 2 Pasang pada Hari Senin

| Menu                          | Jumlah Bill |
|-------------------------------|-------------|
| ['COLD DRINKS', 'FOOD']       | 1324        |
| ['COLD DRINKS', 'SHARE']      | 857         |
| ['COLD DRINKS', 'HOT DRINKS'] | 714         |
| ['FOOD', 'HOT DRINKS']        | 638         |
| ['FOOD', 'SHARE']             | 601         |

Tabel 2.2: Menu Category Favorit 2 Pasang pada Hari Selasa

| Menu                          | Jumlah Bill |
|-------------------------------|-------------|
| ['COLD DRINKS', 'FOOD']       | 1438        |
| ['COLD DRINKS', 'SHARE']      | 950         |
| ['COLD DRINKS', 'HOT DRINKS'] | 747         |
| ['FOOD', 'HOT DRINKS']        | 680         |
| ['FOOD', 'SHARE']             | 676         |

Tabel 2.3: Menu Category Favorit 2 Pasang pada Hari Rabu

| Menu                          | Jumlah Bill |
|-------------------------------|-------------|
| ['COLD DRINKS', 'FOOD']       | 1330        |
| ['COLD DRINKS', 'SHARE']      | 884         |
| ['COLD DRINKS', 'HOT DRINKS'] | 724         |
| ['FOOD', 'HOT DRINKS']        | 668         |
| ['FOOD', 'SHARE']             | 624         |

Tabel 2.4: Menu Category Favorit 2 Pasang pada Hari Kamis

| Menu                          | Jumlah Bill |
|-------------------------------|-------------|
| ['COLD DRINKS', 'FOOD']       | 1726        |
| ['COLD DRINKS', 'SHARE']      | 1181        |
| ['COLD DRINKS', 'HOT DRINKS'] | 916         |
| ['FOOD', 'SHARE']             | 841         |
| ['FOOD', 'HOT DRINKS']        | 825         |

Tabel 2.5: Menu Category Favorit 2 Pasang pada Hari Jumat

| Menu                          | Jumlah Bill |
|-------------------------------|-------------|
| ['COLD DRINKS', 'FOOD']       | 2557        |
| ['COLD DRINKS', 'SHARE']      | 1871        |
| ['COLD DRINKS', 'HOT DRINKS'] | 1422        |
| ['FOOD', 'SHARE']             | 1277        |
| ['FOOD', 'HOT DRINKS']        | 1238        |

Tabel 2.6: Menu Category Favorit 2 Pasang pada Hari Sabtu

| Menu                          | Jumlah Bill |
|-------------------------------|-------------|
| ['COLD DRINKS', 'FOOD']       | 2010        |
| ['COLD DRINKS', 'SHARE']      | 1407        |
| ['COLD DRINKS', 'HOT DRINKS'] | 1078        |
| ['FOOD', 'SHARE']             | 1006        |
| ['FOOD', 'HOT DRINKS']        | 958         |

Tabel 2.7: Menu Category Favorit 2 Pasang pada Hari Minggu

| Hari   | Menu                    | Jumlah Bill |
|--------|-------------------------|-------------|
| Senin  | ['COLD DRINKS', 'FOOD'] | 1208        |
| Selasa | ['COLD DRINKS', 'FOOD'] | 1324        |
| Rabu   | ['COLD DRINKS', 'FOOD'] | 1438        |
| Kamis  | ['COLD DRINKS', 'FOOD'] | 1330        |
| Jumat  | ['COLD DRINKS', 'FOOD'] | 1726        |
| Sabtu  | ['COLD DRINKS', 'FOOD'] | 2557        |
| Minggu | ['COLD DRINKS', 'FOOD'] | 2010        |

Tabel 2.8: Menu Category Paling Favorit 2 Pasang berdasarkan Hari

### Menu Category (3 Pasang)

| Menu                                   | Jumlah Bill |
|--|-------------|
| ['COLD DRINKS', 'FOOD', 'SHARE']       | 514         |
| ['COLD DRINKS', 'FOOD', 'HOT DRINKS']  | 491         |
| ['COLD DRINKS', 'HOT DRINKS', 'SHARE'] | 379         |
| ['FOOD', 'HOT DRINKS', 'SHARE']        | 294         |
| ['COLD DRINKS', 'DESSERT', 'FOOD']     | 208         |

Tabel 3.1: Menu Category Favorit 3 Pasang pada Hari Senin

| Menu                                   | Jumlah Bill |
|--|-------------|
| ['COLD DRINKS', 'FOOD', 'SHARE']       | 566         |
| ['COLD DRINKS', 'FOOD', 'HOT DRINKS']  | 539         |
| ['COLD DRINKS', 'HOT DRINKS', 'SHARE'] | 406         |
| ['FOOD', 'HOT DRINKS', 'SHARE']        | 343         |
| ['COLD DRINKS', 'DESSERT', 'FOOD']     | 230         |

Tabel 3.2: Menu Category Favorit 3 Pasang pada Hari Selasa

| Menu                                   | Jumlah Bill |
|--|-------------|
| ['COLD DRINKS', 'FOOD', 'SHARE']       | 626         |
| ['COLD DRINKS', 'FOOD', 'HOT DRINKS']  | 556         |
| ['COLD DRINKS', 'HOT DRINKS', 'SHARE'] | 433         |
| ['FOOD', 'HOT DRINKS', 'SHARE']        | 355         |
| ['COLD DRINKS', 'DESSERT', 'FOOD']     | 292         |

Tabel 3.3: Menu Category Favorit 3 Pasang pada Hari Rabu

| Menu                                   | Jumlah Bill |
|--|-------------|
| ['COLD DRINKS', 'FOOD', 'SHARE']       | 582         |
| ['COLD DRINKS', 'FOOD', 'HOT DRINKS']  | 551         |
| ['COLD DRINKS', 'HOT DRINKS', 'SHARE'] | 437         |
| ['FOOD', 'HOT DRINKS', 'SHARE']        | 358         |
| ['COLD DRINKS', 'DESSERT', 'FOOD']     | 228         |

Tabel 3.4: Menu Category Favorit 3 Pasang pada Hari Kamis

| Menu                                   | Jumlah Bill |
|--|-------------|
| ['COLD DRINKS', 'FOOD', 'SHARE']       | 791         |
| ['COLD DRINKS', 'FOOD', 'HOT DRINKS']  | 680         |
| ['COLD DRINKS', 'HOT DRINKS', 'SHARE'] | 537         |
| ['FOOD', 'HOT DRINKS', 'SHARE']        | 448         |
| ['COLD DRINKS', 'DESSERT', 'FOOD']     | 359         |

Tabel 3.5: Menu Category Favorit 3 Pasang pada Hari Jumat

| Menu                                   | Jumlah Bill |
|--|-------------|
| ['COLD DRINKS', 'FOOD', 'SHARE']       | 1204        |
| ['COLD DRINKS', 'FOOD', 'HOT DRINKS']  | 1065        |
| ['COLD DRINKS', 'HOT DRINKS', 'SHARE'] | 881         |
| ['FOOD', 'HOT DRINKS', 'SHARE']        | 698         |
| ['COLD DRINKS', 'DESSERT', 'FOOD']     | 550         |

Tabel 3.6: Menu Category Favorit 3 Pasang pada Hari Sabtu

| Menu                                   | Jumlah Bill |
|--|-------------|
| ['COLD DRINKS', 'FOOD', 'SHARE']       | 945         |
| ['COLD DRINKS', 'FOOD', 'HOT DRINKS']  | 818         |
| ['COLD DRINKS', 'HOT DRINKS', 'SHARE'] | 632         |
| ['FOOD', 'HOT DRINKS', 'SHARE']        | 525         |
| ['COLD DRINKS', 'DESSERT', 'FOOD']     | 437         |

Tabel 3.7: Menu Category Favorit 3 Pasang pada Hari Minggu

| Hari   | Menu                             | Jumlah Bill |
|--------|----------------------------------|-------------|
| Senin  | ['COLD DRINKS', 'FOOD', 'SHARE'] | 514         |
| Selasa | ['COLD DRINKS', 'FOOD', 'SHARE'] | 566         |
| Rabu   | ['COLD DRINKS', 'FOOD', 'SHARE'] | 626         |
| Kamis  | ['COLD DRINKS', 'FOOD', 'SHARE'] | 582         |
| Jumat  | ['COLD DRINKS', 'FOOD', 'SHARE'] | 791         |
| Sabtu  | ['COLD DRINKS', 'FOOD', 'SHARE'] | 1204        |
| Minggu | ['COLD DRINKS', 'FOOD', 'SHARE'] | 945         |

Tabel 3.8: Menu Category Paling Favorit 3 Pasang berdasarkan Hari

### Menu Category Detail (1 Pasang)

| Menu         | Jumlah Bill |
|--------------|-------------|
| ['APETISER'] | 883         |
| ['TEA']      | 746         |
| ['COFFEE']   | 741         |
| ['NON RICE'] | 735         |
| ['RICE']     | 667         |

Tabel 4.1: Menu Category Detail Favorit 1 Pasang pada Hari Senin

| Menu         | Jumlah Bill |
|--------------|-------------|
| ['APETISER'] | 936         |
| ['COFFEE']   | 800         |
| ['TEA']      | 799         |
| ['NON RICE'] | 777         |
| ['RICE']     | 758         |

Tabel 4.2: Menu Category Detail Favorit 1 Pasang pada Hari Selasa

| Menu         | Jumlah Bill |
|--------------|-------------|
| ['APETISER'] | 1047        |
| ['NON RICE'] | 905         |
| ['TEA']      | 880         |
| ['COFFEE']   | 863         |
| ['RICE']     | 816         |

Tabel 4.3: Menu Category Detail Favorit 1 Pasang pada Hari Rabu

| Menu         | Jumlah Bill |
|--------------|-------------|
| ['APETISER'] | 979         |
| ['NON RICE'] | 824         |
| ['COFFEE']   | 819         |
| ['TEA']      | 799         |
| ['RICE']     | 742         |

Tabel 4.4: Menu Category Detail Favorit 1 Pasang pada Hari Kamis

| Menu         | Jumlah Bill |
|--------------|-------------|
| ['APETISER'] | 1293        |
| ['TEA']      | 1096        |
| ['NON RICE'] | 1069        |
| ['COFFEE']   | 985         |
| ['RICE']     | 962         |

Tabel 4.5: Menu Category Detail Favorit 1 Pasang pada Hari Jumat

| Menu         | Jumlah Bill |
|--------------|-------------|
| ['APETISER'] | 2027        |
| ['TEA']      | 1601        |
| ['NON RICE'] | 1527        |
| ['RICE']     | 1445        |
| ['COFFEE']   | 1436        |

Tabel 4.6: Menu Category Detail Favorit 1 Pasang pada Hari Sabtu

| Menu         | Jumlah Bill |
|--------------|-------------|
| ['APETISER'] | 1526        |
| ['NON RICE'] | 1286        |
| ['TEA']      | 1279        |
| ['RICE']     | 1191        |
| ['COFFEE']   | 1129        |

Tabel 4.7: Menu Category Detail Favorit 1 Pasang pada Hari Minggu

| Hari   | Menu         | Jumlah Bill |
|--------|--------------|-------------|
| Senin  | ['APETISER'] | 883         |
| Selasa | ['APETISER'] | 936         |
| Rabu   | ['APETISER'] | 1047        |
| Kamis  | ['APETISER'] | 979         |
| Jumat  | ['APETISER'] | 1293        |
| Sabtu  | ['APETISER'] | 2027        |
| Minggu | ['APETISER'] | 1526        |

Tabel 4.8: Menu Category Detail Paling Favorit 1 Pasang berdasarkan Hari

### Menu Category Detail (2 Pasang)

| Menu                   | Jumlah Bill |
|------------------------|-------------|
| ['APETISER', 'TEA']    | 371         |
| ['APETISER', 'COFFEE'] | 361         |
| ['NON RICE', 'TEA']    | 340         |
| ['RICE', 'TEA']        | 317         |
| ['LOKAL FOOD', 'TEA']  | 310         |

Tabel 5.1: Menu Category Detail Favorit 2 Pasang pada Hari Senin

| Menu                   | Jumlah Bill |
|------------------------|-------------|
| ['APETISER', 'TEA']    | 410         |
| ['NON RICE', 'TEA']    | 373         |
| ['APETISER', 'COFFEE'] | 366         |
| ['LOKAL FOOD', 'TEA']  | 363         |
| ['RICE', 'TEA']        | 358         |

Tabel 5.2: Menu Category Detail Favorit 2 Pasang pada Hari Selasa

| Menu                   | Jumlah Bill |
|------------------------|-------------|
| ['APETISER', 'TEA']    | 442         |
| ['NON RICE', 'TEA']    | 432         |
| ['RICE', 'TEA']        | 403         |
| ['APETISER', 'COFFEE'] | 391         |
| ['LOKAL FOOD', 'TEA']  | 391         |

Tabel 5.3: Menu Category Detail Favorit 2 Pasang pada Hari Rabu

| Menu                   | Jumlah Bill |
|------------------------|-------------|
| ['APETISER', 'TEA']    | 396         |
| ['NON RICE', 'TEA']    | 385         |
| ['APETISER', 'COFFEE'] | 382         |
| ['RICE', 'TEA']        | 349         |
| ['LOKAL FOOD', 'TEA']  | 343         |

Tabel 5.4: Menu Category Detail Favorit 2 Pasang pada Hari Kamis

| Menu                   | Jumlah Bill |
|------------------------|-------------|
| ['APETISER', 'TEA']    | 568         |
| ['NON RICE', 'TEA']    | 548         |
| ['APETISER', 'COFFEE'] | 497         |
| ['RICE', 'TEA']        | 495         |
| ['LOKAL FOOD', 'TEA']  | 474         |

Tabel 5.5: Menu Category Detail Favorit 2 Pasang pada Hari Jumat

| Menu                   | Jumlah Bill |
|------------------------|-------------|
| ['APETISER', 'TEA']    | 857         |
| ['NON RICE', 'TEA']    | 778         |
| ['APETISER', 'COFFEE'] | 743         |
| ['RICE', 'TEA']        | 726         |
| ['LOKAL FOOD', 'TEA']  | 696         |

Tabel 5.6: Menu Category Detail Favorit 2 Pasang pada Hari Sabtu

| Menu                 | Jumlah Bill |
|----------------------|-------------|
| ['APETISER', 'TEA']  | 674         |
| ['NON RICE', 'TEA']  | 644         |
| ['RICE', 'TEA']      | 636         |
| ['NON RICE', 'RICE'] | 604         |
| ['APETISER', 'RICE'] | 579         |

Tabel 5.7: Menu Category Detail Favorit 2 Pasang pada Hari Minggu

| Hari   | Menu                | Jumlah Bill |
|--------|---------------------|-------------|
| Senin  | ['APETISER', 'TEA'] | 371         |
| Selasa | ['APETISER', 'TEA'] | 410         |
| Rabu   | ['APETISER', 'TEA'] | 442         |
| Kamis  | ['APETISER', 'TEA'] | 396         |
| Jumat  | ['APETISER', 'TEA'] | 568         |
| Sabtu  | ['APETISER', 'TEA'] | 857         |
| Minggu | ['APETISER', 'TEA'] | 674         |

Tabel 5.8: Menu Category Detail Paling Favorit 2 Pasang berdasarkan Hari



### Menu Category Detail (3 Pasang)

| Menu                              | Jumlah Bill |
|-----------------------------------|-------------|
| ['NON RICE', 'RICE', 'TEA']       | 173         |
| ['APETISER', 'LOKAL FOOD', 'TEA'] | 169         |
| ['LOKAL FOOD', 'RICE', 'TEA']     | 166         |
| ['APETISER', 'NON RICE', 'TEA']   | 165         |
| ['LOKAL FOOD', 'NON RICE', 'TEA'] | 162         |

Tabel 6.1: Menu Category Detail Favorit 3 Pasang pada Hari Senin

| Menu                              | Jumlah Bill |
|-----------------------------------|-------------|
| ['APETISER', 'LOKAL FOOD', 'TEA'] | 216         |
| ['APETISER', 'NON RICE', 'TEA']   | 196         |
| ['LOKAL FOOD', 'RICE', 'TEA']     | 196         |
| ['LOKAL FOOD', 'NON RICE', 'TEA'] | 186         |
| ['APETISER', 'RICE', 'TEA']       | 185         |

Tabel 6.2: Menu Category Detail Favorit 3 Pasang pada Hari Selasa

| Menu                              | Jumlah Bill |
|-----------------------------------|-------------|
| ['APETISER', 'LOKAL FOOD', 'TEA'] | 223         |
| ['NON RICE', 'RICE', 'TEA']       | 221         |
| ['APETISER', 'NON RICE', 'TEA']   | 219         |
| ['APETISER', 'RICE', 'TEA']       | 211         |
| ['LOKAL FOOD', 'RICE', 'TEA']     | 210         |

Tabel 6.3: Menu Category Detail Favorit 3 Pasang pada Hari Rabu

| Menu                              | Jumlah Bill |
|-----------------------------------|-------------|
| ['APETISER', 'LOKAL FOOD', 'TEA'] | 199         |
| ['APETISER', 'NON RICE', 'TEA']   | 196         |
| ['APETISER', 'RICE', 'TEA']       | 186         |
| ['LOKAL FOOD', 'NON RICE', 'TEA'] | 183         |
| ['NON RICE', 'RICE', 'TEA']       | 178         |

Tabel 6.4: Menu Category Detail Favorit 3 Pasang pada Hari Kamis

| Menu                              | Jumlah Bill |
|-----------------------------------|-------------|
| ['APETISER', 'NON RICE', 'TEA']   | 281         |
| ['APETISER', 'LOKAL FOOD', 'TEA'] | 280         |
| ['APETISER', 'RICE', 'TEA']       | 279         |
| ['NON RICE', 'RICE', 'TEA']       | 274         |
| ['LOKAL FOOD', 'NON RICE', 'TEA'] | 267         |

Tabel 6.5: Menu Category Detail Favorit 3 Pasang pada Hari Jumat

| Menu                              | Jumlah Bill |
|-----------------------------------|-------------|
| ['APETISER', 'NON RICE', 'TEA']   | 412         |
| ['NON RICE', 'RICE', 'TEA']       | 392         |
| ['LOKAL FOOD', 'RICE', 'TEA']     | 389         |
| ['APETISER', 'LOKAL FOOD', 'TEA'] | 387         |
| ['APETISER', 'RICE', 'TEA']       | 387         |

Tabel 6.6: Menu Category Detail Favorit 3 Pasang pada Hari Sabtu

| Menu                              | Jumlah Bill |
|-----------------------------------|-------------|
| ['NON RICE', 'RICE', 'TEA']       | 358         |
| ['APETISER', 'RICE', 'TEA']       | 351         |
| ['LOKAL FOOD', 'RICE', 'TEA']     | 334         |
| ['APETISER', 'NON RICE', 'TEA']   | 326         |
| ['APETISER', 'LOKAL FOOD', 'TEA'] | 320         |

Tabel 6.7: Menu Category Detail Favorit 3 Pasang pada Hari Minggu

| Hari   | Menu                              | Jumlah Bill |
|--------|-----------------------------------|-------------|
| Senin  | ['NON RICE', 'RICE', 'TEA']       | 173         |
| Selasa | ['APETISER', 'LOKAL FOOD', 'TEA'] | 216         |
| Rabu   | ['APETISER', 'LOKAL FOOD', 'TEA'] | 223         |
| Kamis  | ['APETISER', 'LOKAL FOOD', 'TEA'] | 199         |
| Jumat  | ['APETISER', 'NON RICE', 'TEA']   | 281         |
| Sabtu  | ['APETISER', 'NON RICE', 'TEA']   | 412         |
| Minggu | ['NON RICE', 'RICE', 'TEA']       | 358         |

Tabel 6.8: Menu Category Detail Paling Favorit 3 Pasang berdasarkan Hari

### Menu (1 Pasang)

| Menu                      | Jumlah Bill |
|---------------------------|-------------|
| ['LYCHEE TEA ICE']        | 448         |
| ['GRILLED CHICKEN']       | 427         |
| ['MINERAL WATER']         | 374         |
| ['MIX PLATTER']           | 311         |
| ['BEEF YAKINIKU DONBURI'] | 298         |

Tabel 7.1: Menu Favorit 1 Pasang pada Hari Senin

| Menu                      | Jumlah Bill |
|---------------------------|-------------|
| ['GRILLED CHICKEN']       | 466         |
| ['LYCHEE TEA ICE']        | 465         |
| ['MINERAL WATER']         | 381         |
| ['BEEF YAKINIKU DONBURI'] | 327         |
| ['MIX PLATTER']           | 320         |

Tabel 7.2: Menu Favorit 1 Pasang pada Hari Selasa

| Menu                 | Jumlah Bill |
|----------------------|-------------|
| ['LYCHEE TEA ICE']   | 530         |
| ['GRILLED CHICKEN']  | 524         |
| ['MINERAL WATER']    | 462         |
| ['MIX PLATTER']      | 354         |
| ['CHICKEN BARBEQUE'] | 341         |

Tabel 7.3: Menu Favorit 1 Pasang pada Hari Rabu

| Menu                      | Jumlah Bill |
|---------------------------|-------------|
| ['GRILLED CHICKEN']       | 495         |
| ['LYCHEE TEA ICE']        | 486         |
| ['MINERAL WATER']         | 379         |
| ['MIX PLATTER']           | 351         |
| ['BEEF YAKINIKU DONBURI'] | 316         |

Tabel 7.4: Menu Favorit 1 Pasang pada Hari Kamis

| Menu                      | Jumlah Bill |
|---------------------------|-------------|
| ['LYCHEE TEA ICE']        | 678         |
| ['GRILLED CHICKEN']       | 598         |
| ['MINERAL WATER']         | 521         |
| ['MIX PLATTER']           | 479         |
| ['BEEF YAKINIKU DONBURI'] | 415         |

Tabel 7.5: Menu Favorit 1 Pasang pada Hari Jumat

| Menu                      | Jumlah Bill |
|---------------------------|-------------|
| ['LYCHEE TEA ICE']        | 942         |
| ['GRILLED CHICKEN']       | 897         |
| ['MINERAL WATER']         | 773         |
| ['MIX PLATTER']           | 771         |
| ['BEEF YAKINIKU DONBURI'] | 623         |

Tabel 7.6: Menu Favorit 1 Pasang pada Hari Sabtu

| Menu                      | Jumlah Bill |
|---------------------------|-------------|
| ['LYCHEE TEA ICE']        | 776         |
| ['GRILLED CHICKEN']       | 734         |
| ['MINERAL WATER']         | 544         |
| ['BEEF YAKINIKU DONBURI'] | 508         |
| ['CHICKEN BARBEQUE']      | 500         |

Tabel 7.7: Menu Favorit 1 Pasang pada Hari Minggu

| Hari   | Menu                | Jumlah Bill |
|--------|---------------------|-------------|
| Senin  | ['LYCHEE TEA ICE']  | 448         |
| Selasa | ['GRILLED CHICKEN'] | 466         |
| Rabu   | ['LYCHEE TEA ICE']  | 530         |
| Kamis  | ['GRILLED CHICKEN'] | 495         |
| Jumat  | ['LYCHEE TEA ICE']  | 678         |
| Sabtu  | ['LYCHEE TEA ICE']  | 942         |
| Minggu | ['LYCHEE TEA ICE']  | 776         |

Tabel 7.8: Menu Paling Favorit 1 Pasang berdasarkan Hari

### Menu (2 Pasang)

| Menu  | Jumlah Bill |
|---|-------------|
| ['GRILLED CHICKEN', 'LYCHEE TEA ICE']       | 136         |
| ['BEEF YAKINIKU DONBURI', 'LYCHEE TEA ICE'] | 117         |
| ['CHICKEN BARBEQUE', 'GRILLED CHICKEN']     | 117         |
| ['LYCHEE TEA ICE', 'MINERAL WATER']         | 110         |
| ['GRILLED CHICKEN', 'MINERAL WATER']        | 105         |

Tabel 8.1: Menu Favorit 2 Pasang pada Hari Senin

| Menu  | Jumlah Bill |
|---|-------------|
| ['GRILLED CHICKEN', 'LYCHEE TEA ICE']       | 137         |
| ['GRILLED CHICKEN', 'MINERAL WATER']        | 112         |
| ['LYCHEE TEA ICE', 'SOTO BETAWI BANG KRIS'] | 109         |
| ['CHICKEN BARBEQUE', 'GRILLED CHICKEN']     | 104         |
| ['LYCHEE TEA ICE', 'MINERAL WATER']         | 103         |

Tabel 8.2: Menu Favorit 2 Pasang pada Hari Selasa

| Menu  | Jumlah Bill |
|---|-------------|
| ['GRILLED CHICKEN', 'LYCHEE TEA ICE']       | 157         |
| ['GRILLED CHICKEN', 'MINERAL WATER']        | 145         |
| ['LYCHEE TEA ICE', 'MINERAL WATER']         | 138         |
| ['CHICKEN BARBEQUE', 'GRILLED CHICKEN']     | 122         |
| ['BEEF YAKINIKU DONBURI', 'LYCHEE TEA ICE'] | 119         |

Tabel 8.3: Menu Favorit 2 Pasang pada Hari Rabu

| Menu   | Jumlah Bill |
|--|-------------|
| ['GRILLED CHICKEN', 'LYCHEE TEA ICE']          | 138         |
| ['GRILLED CHICKEN', 'MINERAL WATER']           | 114         |
| ['CHICKEN BARBEQUE', 'GRILLED CHICKEN']        | 112         |
| ['BEEF YAKINIKU DONBURI', 'LYCHEE TEA ICE']    | 104         |
| ['PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)'] | 104         |

Tabel 8.4: Menu Favorit 2 Pasang pada Hari Kamis

| Menu   | Jumlah Bill |
|--|-------------|
| ['GRILLED CHICKEN', 'LYCHEE TEA ICE']          | 189         |
| ['GRILLED CHICKEN', 'MINERAL WATER']           | 170         |
| ['LYCHEE TEA ICE', 'MINERAL WATER']            | 166         |
| ['LYCHEE TEA ICE', 'MIX PLATTER']              | 161         |
| ['PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)'] | 160         |

Tabel 8.5: Menu Favorit 2 Pasang pada Hari Jumat

| Menu   | Jumlah Bill |
|--|-------------|
| ['GRILLED CHICKEN', 'LYCHEE TEA ICE']              | 282         |
| ['GRILLED CHICKEN', 'MINERAL WATER']               | 238         |
| ['PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)']     | 227         |
| ['MUSHROOM SAUCE (PACKAGE)', 'PREMIUM BEEF STEAK'] | 221         |
| ['CHICKEN BARBEQUE', 'GRILLED CHICKEN']            | 217         |

Tabel 8.6: Menu Favorit 2 Pasang pada Hari Sabtu

| Menu  | Jumlah Bill |
|---|-------------|
| ['GRILLED CHICKEN', 'LYCHEE TEA ICE']       | 226         |
| ['CHICKEN BARBEQUE', 'GRILLED CHICKEN']     | 183         |
| ['BEEF YAKINIKU DONBURI', 'LYCHEE TEA ICE'] | 177         |
| ['GRILLED CHICKEN', 'MINERAL WATER']        | 173         |
| ['BEEF MARANGGI', 'LYCHEE TEA ICE']         | 172         |

Tabel 8.7: Menu Favorit 2 Pasang pada Hari Minggu

| Hari   | Menu                                  | Jumlah Bill |
|--------|---------------------------------------|-------------|
| Senin  | ['GRILLED CHICKEN', 'LYCHEE TEA ICE'] | 136         |
| Selasa | ['GRILLED CHICKEN', 'LYCHEE TEA ICE'] | 137         |
| Rabu   | ['GRILLED CHICKEN', 'LYCHEE TEA ICE'] | 157         |
| Kamis  | ['GRILLED CHICKEN', 'LYCHEE TEA ICE'] | 138         |
| Jumat  | ['GRILLED CHICKEN', 'LYCHEE TEA ICE'] | 189         |
| Sabtu  | ['GRILLED CHICKEN', 'LYCHEE TEA ICE'] | 282         |
| Minggu | ['GRILLED CHICKEN', 'LYCHEE TEA ICE'] | 226         |

Tabel 8.8: Menu Paling Favorit 2 Pasang berdasarkan Hari

### Menu (3 Pasang)

| Menu   | Jumlah Bill |
|--|-------------|
| ['PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)', 'WELL DONE (PACKAGE)']      | 60          |
| ['BEEF YAKINIKU DONBURI', 'GRILLED CHICKEN', 'LYCHEE TEA ICE']             | 56          |
| ['BEEF MARANGGI', 'BEEF YAKINIKU DONBURI', 'LYCHEE TEA ICE']               | 50          |
| ['MUSHROOM SAUCE (PACKAGE)', 'PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)'] | 49          |
| ['MUSHROOM SAUCE (PACKAGE)', 'PREMIUM BEEF STEAK', 'WELL DONE (PACKAGE)']  | 48          |

Tabel 9.1: Menu Favorit 3 Pasang pada Hari Senin

| Menu   | Jumlah Bill |
|--|-------------|
| ['PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)', 'WELL DONE (PACKAGE)']      | 68          |
| ['MUSHROOM SAUCE (PACKAGE)', 'PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)'] | 57          |
| ['MEDIUM (PACKAGE)', 'MUSHROOM SAUCE (PACKAGE)', 'PREMIUM BEEF STEAK']     | 55          |
| ['MUSHROOM SAUCE (PACKAGE)', 'PREMIUM BEEF STEAK', 'WELL DONE (PACKAGE)']  | 52          |
| ['MASHED POTATOES (PACKAGE)', 'PREMIUM BEEF STEAK', 'WELL DONE (PACKAGE)'] | 52          |

Tabel 9.2: Menu Favorit 3 Pasang pada Hari Selasa

| Menu  | Jumlah Bill |
|---|-------------|
| ['MUSHROOM SAUCE (PACKAGE)', 'PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)']  | 66          |
| ['PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)', 'WELL DONE (PACKAGE)']       | 63          |
| ['MEDIUM (PACKAGE)', 'PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)']          | 60          |
| ['MEDIUM (PACKAGE)', 'MUSHROOM SAUCE (PACKAGE)', 'PREMIUM BEEF STEAK']      | 58          |
| ['MASHED POTATOES (PACKAGE)', 'PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)'] | 57          |

Tabel 9.3: Menu Favorit 3 Pasang pada Hari Rabu

| Menu  | Jumlah Bill |
|---|-------------|
| ['PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)', 'WELL DONE (PACKAGE)']           | 68          |
| ['MUSHROOM SAUCE (PACKAGE)', 'PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)']      | 64          |
| ['MASHED POTATOES (PACKAGE)', 'MUSHROOM SAUCE (PACKAGE)', 'PREMIUM BEEF STEAK'] | 49          |
| ['MUSHROOM SAUCE (PACKAGE)', 'PREMIUM BEEF STEAK', 'WELL DONE (PACKAGE)']       | 48          |
| ['MASHED POTATOES (PACKAGE)', 'PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)']     | 48          |

Tabel 9.4: Menu Favorit 3 Pasang pada Hari Kamis

| Menu   | Jumlah Bill |
|--|-------------|
| ['MUSHROOM SAUCE (PACKAGE)', 'PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)'] | 99          |
| ['PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)', 'WELL DONE (PACKAGE)']      | 99          |
| ['FRENCH FRIES (PACKAGE)', 'PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)']   | 81          |
| ['MEDIUM (PACKAGE)', 'PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)']         | 81          |
| ['MEDIUM (PACKAGE)', 'MUSHROOM SAUCE (PACKAGE)', 'PREMIUM BEEF STEAK']     | 80          |

Tabel 9.5: Menu Favorit 3 Pasang pada Hari Jumat

| Menu  | Jumlah Bill |
|---|-------------|
| ['MUSHROOM SAUCE (PACKAGE)', 'PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)']  | 142         |
| ['PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)', 'WELL DONE (PACKAGE)']       | 124         |
| ['MEDIUM (PACKAGE)', 'MUSHROOM SAUCE (PACKAGE)', 'PREMIUM BEEF STEAK']      | 115         |
| ['MASHED POTATOES (PACKAGE)', 'PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)'] | 102         |
| ['MUSHROOM SAUCE (PACKAGE)', 'PREMIUM BEEF STEAK', 'WELL DONE (PACKAGE)']   | 100         |

Tabel 9.6: Menu Favorit 3 Pasang pada Hari Sabtu

| Menu  | Jumlah Bill |
|---|-------------|
| ['MEDIUM (PACKAGE)', 'MUSHROOM SAUCE (PACKAGE)', 'PREMIUM BEEF STEAK']          | 97          |
| ['MUSHROOM SAUCE (PACKAGE)', 'PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)']      | 90          |
| ['CHICKEN BARBEQUE', 'GRILLED CHICKEN', 'LYCHEE TEA ICE']                       | 79          |
| ['MASHED POTATOES (PACKAGE)', 'MUSHROOM SAUCE (PACKAGE)', 'PREMIUM BEEF STEAK'] | 78          |
| ['PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)', 'WELL DONE (PACKAGE)']           | 76          |

Tabel 9.7: Menu Favorit 3 Pasang pada Hari Minggu



| Hari   | Menu   | Jumlah Bill |
|--------|--|-------------|
| Senin  | ['PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)', 'WELL DONE (PACKAGE)']      | 60          |
| Selasa | ['PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)', 'WELL DONE (PACKAGE)']      | 68          |
| Rabu   | ['MUSHROOM SAUCE (PACKAGE)', 'PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)'] | 66          |
| Kamis  | ['PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)', 'WELL DONE (PACKAGE)']      | 68          |
| Jumat  | ['MUSHROOM SAUCE (PACKAGE)', 'PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)'] | 99          |
| Sabtu  | ['MUSHROOM SAUCE (PACKAGE)', 'PREMIUM BEEF STEAK', 'TENDERLOIN (PACKAGE)'] | 142         |
| Minggu | ['MEDIUM (PACKAGE)', 'MUSHROOM SAUCE (PACKAGE)', 'PREMIUM BEEF STEAK']     | 97          |

Tabel 9.8: Menu Paling Favorit 3 Pasang berdasarkan Hari

Catatan:

Jumlah Bill adalah satuan dalam 2 tahun, untuk perkiraan per harinya dapat dibagi dengan 100 (2 tahun ada 104 minggu), sebagai contoh 2 Pasang Menu favorit pada Hari Sabtu adalah Grilled Chicken dan Lychee Tea Ice dengan Jumlah Bill 282, sehingga pada Hari Sabtu, dapat disiapkan stok rata-rata 2,82 Bill (3 Bill) menu Grilled Chicken dan Lychee Tea Ice.

Selain itu juga bisa dilakukan strategi promo untuk Cross-selling, dimana pelanggan yang memesan dua pasang makanan diharapkan dapat Cross-selling untuk membeli 3 pasang makanan, sebagai contoh 2 Pasang Menu Favorit pada Hari Sabtu adalah **Grilled Chicken dan Lychee Tea Ice** dengan Jumlah Bill **282**, dan 3 Pasang Menu Favorit pada Hari Rabu urutan ke-13 adalah **Chicken Barbeque, Grilled Chicken, dan Lychee Tea Ice** dengan Jumlah Bill hanya sebanyak **82**. Restoran dapat mengadakan promo potongan harga atau paketan jika memesan **Chicken Barbeque, Grilled Chicken, dan Lychee Tea Ice**, sehingga diekspektasikan dapat menambah Jumlah Bill dari **82** menjadi **282** (sama dengan pasangan 2 makanan).

**Data selengkapnya dapat dicek pada folder menu\_favorit**