PART-2

1) Time-Based Analysis
   a. Number of Arrests by Day, Week, Month, Quarter and Year:

   Observation:
   - Arrests don't significantly increase or decrease from quarter to quarter.
   - Weekly Trends: The number of arrests varies noticeably each week, which may indicate seasonal patterns or different enforcement.
   - Monthly Trends: Toward the end of the year, arrests appear to be slightly down, perhaps as a result of the weather or the holidays.
   - Yearly Trend: According to the data, the number of arrests remains constant from year to year, suggesting stable crime rates.

   Insights:
   - With just slight modifications at the end-of-year holidays, law enforcement resource allocation can stay constant throughout the year.
   - Weekly variations point to possible seasonal occurrences or variables affecting crime trends.

   b. Peak Days and Months for Arrests:

   Observation:
   - Peak Days: Toward the end of each month, especially on weekends, the most arrests take place.
   - Peak Months: March and June have the greatest arrest rates, which may be due to seasonal reasons or public events.

   Insights:
   - Crime prevention may be aided by increased police presence on the final weekend of each month.
   - Events or public gatherings scheduled strategically for March and June could lessen rises in violence.

2) Crime Patterns & Trends
   a. Top 5 Most Frequently Occurring Crimes:

Observation:
- The top 5 most frequent crimes are:
  - Assault 3rd Degree
  - Petit Larceny (from open areas)
  - Assault 2nd Degree (Unclassified)
  - Traffic Unclassified Misdemeanor
  - Theft of Services (Unclassified)
- The highest rate of 3rd degree assault indicates that minor physical altercations are common.

Insights:
- Programs in the community that deal with anger management and conflict resolution may be able to lower the number of assaults.
- Petty thievery may be reduced by improved public safety measures, especially in open spaces.

b. Crimes Increasing or Decreasing Over Time:

Observation:
- Increasing Trends: A steady rise in larceny (petit) from open spaces suggests an increase in small-time thefts.
- Decreasing Trends: There is a downward trend in traffic unclassified misdemeanors and theft of services, which may be the result of shifting police priorities.

Insights:
- The growing trend of petty thievery may be stopped by more surveillance in public areas.
- Resources from dwindling categories should be reallocated to growing crime types.

3) Geographic Analysis
a. Distribution of Felony vs. Misdemeanor Arrests by Precinct:

Observation:
- In most precincts, misdemeanors are more common than felonies.
- A higher percentage of felony arrests in some precincts may be a sign of high-crime areas.

Insights:
- Strategic crime reduction initiatives should focus on precincts with high felony rates.
- In regions where misdemeanors predominate, more community policing may be able to stop crime from getting worse.

b. Borough with the Highest Number of Arrests:

Observation:
- The city with the most arrests is Brooklyn (K), closely followed by Manhattan (M).
- Arrests in other boroughs are distributed quite evenly.

Insights:
- Targeted community involvement and law enforcement efforts are needed in Brooklyn and Manhattan.
- In certain boroughs, data-driven policing techniques, such as hotspot analysis, could be used.

4) Demographic Analysis of Arrests
   a. Distribution of Arrestees by Age, Race and Gender:

Observation:
- Age Group: The 25–44 age group accounts for the majority of arrests, followed by the 18–24 age group.
- Race: Black and white Hispanic individuals have the greatest arrest rates.
- Gender: Across all crime categories, there are far more male arrestees than females.

Insight:
- Crime rates could be decreased by targeted social activities aimed at the 18–44 age range.
- It is important to create gender-specific intervention plans, especially for young men.
- Programs for socioeconomic development and community involvement may aid in resolving racial inequities.

5) Predictive & Preventive Insights
   a. High-Crime Areas Based on Historical Trends:

   Observation:
   - In Brooklyn and Manhattan, certain precincts are consistently associated with high crime rates.
   - The majority of crime hotspots are found in areas with a lot of nightlife and commerce.

   Insight:
   - For proactive crime prevention, predictive police models could be implemented in areas with a high crime rate.
   - It is advised to work with nearby companies to improve security and surveillance.