With the given columns in the dataset, perform the Exploratory Data Analysis (EDA) using appropriate figures and techniques. Use the necessary libraries to read, manipulate and visualize the data.

1. **Data Inspection and Cleaning**:
    - Check for missing values and handle them appropriately (e.g., imputation, dropping rows/columns).
    - Check for duplicates and remove them if necessary.
    - Identify and handle outliers, if any.
    - Check for inconsistencies in the data (e.g., invalid values, typos).
2. **Descriptive Statistics**:
    - Calculate summary statistics (mean, median, mode, standard deviation, etc.) for numerical columns like lead_time, stays_in_weekend_nights, stays_in_week_nights, adults, children, babies, previous_cancellations, previous_bookings_not_canceled, days_in_waiting_list, adr, required_car_parking_spaces, and total_of_special_requests.
    - Display value counts and frequencies for categorical columns like hotel, country, market_segment, distribution_channel, is_repeated_guest, reserved_room_type, assigned_room_type, deposit_type, agent, company, customer_type, reservation_status.
3. **Data Visualization**:
    - Create histograms or box plots for numerical columns to visualize the distribution and identify potential outliers.
    - Use bar plots or pie charts to visualize the distribution of categorical columns.
    - Create scatter plots or heatmaps to explore relationships between numerical columns.
    - Use line plots to visualize trends over time for columns like arrival_date_year, arrival_date_month, arrival_date_week_number, and arrival_date_day_of_month.
4. **Correlation Analysis**:
    - Calculate the correlation matrix to identify potential relationships between numerical columns. (use pandas df.corr())
    - Visualize the correlation matrix using a heatmap.
5. **Categorical Data Analysis**:
    - Perform one-hot encoding or label encoding for categorical columns if required for further analysis.
    - Analyze categorical columns like hotel, country, market_segment, distribution_channel, reserved_room_type, assigned_room_type, deposit_type, agent, company, customer_type, and reservation_status to identify patterns or trends.
    - Create contingency tables or mosaic plots to analyze the relationship between categorical columns.
6. **Time Series Analysis**:
    - Analyze the arrival_date_year, arrival_date_month, arrival_date_week_number, and arrival_date_day_of_month columns to identify seasonality or trends in bookings over time.
    - Create time series plots or decompose the time series to understand the trend, seasonality, and residuals.

7. **Feature Engineering**:
    - Create new features based on existing columns, such as calculating the duration of stay from stays_in_weekend_nights and stays_in_week_nights.
    - Derive new features from date columns like arrival_date_year, arrival_date_month, arrival_date_week_number, and arrival_date_day_of_month (e.g., season, month name, day of the week).
8. **Handling Datetime Columns**:
    - Convert the reservation_status_date column to datetime format if necessary.
    - Extract additional features from the datetime column, such as day of the week, month, or hour.