```
# STEP 1: LOAD DATA
Load bus_planning from “Bus Planning.xlxs”
Load distance_matrix from “DistanceMatrix.xlsx”
Load battery capacity, charging speed, consumption rate, location,
charging stations, capacities

Convert time to datetime

# STEP 2: FEASABILITY CHECK
For each bus in bus_planning:
     battery=battery_capacity
     for each trip in bus_trips:
          energy_used = trip_distance * consumption_rate
          Battery -= energy_used
          If battery < 0 or trip_time > end_time[i]:
               mark trip as NOT feasible
               add to non_feasible list

# STEP 3: OPTIMALIZATION
for each bus in bus_planning:
     Check idle_time
     Find charging_stations
     Suggest swaps

# STEP 4: FEASIBILITY
run feasibility_checl on improved_plan
If plan is not valid:
     go back to step 3

# STEP 5: DISPLAY
Generate gantt_chart
plot battery_levels
show charging_station_usage
Save feasibility_report
display results in interface

# STEP 6: REUSE
save parameters and steps
```