Problem Definition-

1 .Objective

Build a real-time car simulator in the terminal using C and ncurses library that mimics:
Vehicle motion: speed, acceleration, braking, steering
Gear-based behavior: forward, neutral, reverse
Fuel consumption and limits
Real-time display of vehicle state
User control using keyboard

2.Controls

(i)Throttle (accelerate) :
- Increase speed when speed
- Key used :- W or Upper Arrow
- Range :- 0 - no throttle
          1 - full throttle
- If not pressed it will move towards 0

(ii) Brake (Reverse / Deaccelerate)
- Range :- 0 - no throttle
-         1 - full throttle
- Keys used :- S or Down arrow
- Decrease the speed
- If the speed is 0 and u press S/down arrow it will move in reverse
- If release it will comeback to 0

(iii) Steering (change Direction left/right)
- It will change the direction
- Keys Used
  1. Left Arrow / A - To move left
  2. Right Arrow / D - To move right

- Range :- -1 (full Left) to +1 (full Right)
- Used with acceleration and reverse keys
- If we release any A/D keys it will come to 0 and move in forward direction

(iv) Gear
- Keys :- Reverse (0 to 30) , 0 -> Neutral , 1 -- 5 —> Forward gears (0 to 150 km/hr)
- Speed is limited by current gear's max speed
    - 1st gear = 0 to 30
    - 2nd gear = 30 to 50
    - 3rd gear = 50 to 80
    - 4th gear = 80 to 120
    - 5th gear = 120 to 150