Case 1 - Encapsulation

Build a class called as Car Create Car class – Encapsulation

- **Instance members**:
    1. VehicleId – This should be auto incremented for each object.
    2. RegistrationNumber: Is of type string.
    3. DateOfManufacture – Is of Type DateTime
    4. Color – Is of type Enum and should be value from White, Black, Red, Grey, Brown
    5. Make – Is of type string
    6. Model – Is of type string
    7. Price – Is of type Decimal.
    8. CurrentPrice – Readonly decimal property and should return value depreciated at 10% per annum. If actual price is 100 after One year its CurrentPrice would be 90(100-10%) and after two years it would be 81 (90-10%) and so on
    9. Status – A readonly string which shows the current speed of car.
- **Instance Constructor:**
    - Provide constructor with Parameters to initialize all the Instance Members
    - Set Status to "Congratulations on Purchasing a new car"
- **Static Members**:
    - MaxAccelarateSpeed – When we accelerate the car we cannot increase speed by this amount.
    - MinDecelarateSpeed – When we decelerate the car, we cannot decrease speed by this amount.
    - ServiceYears: After these many years, Car cannot Start and will throw error – "Car Expired"
- **Instance Methods**: Start(), Stop( ), Accelarate(int offsetSpeed), Decelarate(int offsetSpeed)
    I. **Start()** method
        a. Set the car to initial speed of 20.
        b. After Service Years, Car should throw exception with message "Car Expired" and not start.
        c. Change the Status accordingly eg. "Car Started at a speed of 20"
    II. Stop() method
        a. Set the car speed to 0
        b. Set the Status accordingly eg: "Car Stopped"
    III. **Accelerate(int offsetSpeed):**
        a. To increase Speed of Car by offsetSpeed
        b. **offsetSpeed** should not be greater than MaxAccerateSpeed.
        c. **Car Speed should not go beyond 140**
    IV. **Decelerate(int offsetSpeed)**
        a. To decrease Speed of Car by offsetSpeed
        b. offsetSpeed speed should not be less than MinDecelarateSpeed.

c. Car Speed cannot be less than 0.

Build the GUI as below and program each button using the above Car class.