

Assignment – 15
8th May 2023
(Single & Hierarchical Inheritance)

1. Create a class Vehicle as follows :
Data members (All are private) –[Brand, Country_of_Origin, Base_price]
Methods - input (to input details of vehicle) and display (to show vehicle details).
Create a sub class Car as follows:
Data members – [Model, speed, Market_price]
[NB: Market price of a car can be calculated from the Base price and speed. If speed is above 80km/hr, market price will be 15% more than the base price otherwise market price will be 5% less than the base price.]
Methods – read (to input car details) and show (to show car details).
In addition to above methods add more appropriate methods to set the required data members.
Now create objects. Input required data and show the details (Brand, Country_of_Origin, Base_price, Model, speed, Market_price) of any car.
2. Create two classes such as **Teacher** (basic, da, hra, epf, sub_taught) and **Student** (fees_per_sem, course, duration) which are inherited from class **Person**(name, Id, year_of_join). Design appropriate methods to input the data as given above whenever required.
Prepare an annual report for a Teacher showing the details such as Name, Id, Subject Taught, Joining year, Basic salary per month, Total net salary received per year, Total Epf deposited per year. If [Basic=15500/-, da=110%, hra=15%, and epf=12%]
Inform the student by showing details such as Name, Id, Course Offered, Joining year and total fees to be paid if the course duration is 4 years and fees per semester is 18000/-.