DATA LAB 2

Name: Ahmed Kasteer

Roll Number: 20f-0336

Section: 3D

Question # 5:

#include <iostream>

#include<string>

using namespace std;

class factory

{

private:

int factoryID;

string factorylocation;

public:

int numberOfVehicles;

int vehicleParts;

void setfactoryID()

{

cout << "Enter factoryID" << endl;

cin >> factoryID;

}

void getFactoryID()

{

cout << "factory id is: " << factoryID << endl;

}

void setfactorylocation()

{

cout << "Enter factory Location" << endl;

cin >> factorylocation;

}

void getFactorylocation()

{

cout <<"factory location is: " << factorylocation << endl;

}

void setnumberOfVehicles()

{

cout << "Enter no. of vehicles" << endl;

cin >> numberOfVehicles;

}

void getnumberofvehicles()

{

cout << "Number of vehicles is: " << numberOfVehicles << endl;

}

void setVehicleParts()

{

cout << "Enter vehicle parts" << endl;

cin >> vehicleParts;

}

void getvehicleparts()

{

cout << "number of vehicles parts: " << vehicleParts << endl;

}

};

class vehicle : public factory

{

private:

int vehicleID;

int chasisNumber;

string color;

bool rearWheel;

public:

string manufacturer;

vehicle()

{

int vehicleID = 0;

int chasisNumber = 0;

string color = "";

bool rearWheel= false;

}

vehicle(int a, int b, string c, bool d)

{

int vehicleID = a;

int chasisNumber = b;

string color = c;

bool rearWheel = d;

}

void setVehicleID()

{

cout << "Enter vehicle ID, must be greater than 0 condition required" << endl; // condition set for positive vehicle ID > 0

cin >> vehicleID;

if (vehicleID > 0)

{

vehicleID = vehicleID;

}

else

{

cout << "VehicleID could not be set." << endl;

}

}

void getVehicleID()

{

cout << "Vehicle ID is: " << vehicleID << endl;

}

void setchasisNumber()

{

cout << "Enter chasis ID" << endl; // condition set for positive chasis number > 0

cin >> chasisNumber;

if (chasisNumber > 0)

{

chasisNumber = chasisNumber;

}

else

{

cout << "ChasisNumber could not be set." << endl;

}

}

void getchasisNumber()

{

cout << "CHasis number is :" << chasisNumber << endl;

}

void setcolor()

{

cout << "Enter vehicle color" << endl;

cin >> color;

}

void getcolor()

{

cout << "Color is: " << color << endl;

}

void setrearwheel()

{

cout << "Enter vehicle rearwheel information, enter 1 if it is rear wheel else it will be set to front wheel" << endl;

int x;

cin >> x;

if (x = 1)

{

rearWheel = true;

}

else

{

rearWheel = false;

}

}

bool getrearwheel()

{

return rearWheel;

}

void setmanufacturer()

{

cout << "Enter vehicle manufacturer" << endl;

cin >> manufacturer;

}

void getmanufacturer()

{

cout <<"Manufacturer is: " << manufacturer;

}

};

int main()

{

vehicle obj;

factory obj1;

obj1.setfactoryID();

obj1.getFactoryID();

obj1.setnumberOfVehicles();

obj1.getnumberofvehicles();

obj1.setfactorylocation();

obj1.getFactorylocation();

obj1.setVehicleParts();

obj1.getvehicleparts();

vehicle(001, 002, "red", false);

obj.setVehicleID();

obj.getVehicleID();

obj.setchasisNumber();

obj.getchasisNumber();

obj.setcolor();

obj.getcolor();

obj.setrearwheel();

obj.getrearwheel();

obj.setmanufacturer();

obj.getmanufacturer();

return 0;

system("pause");

}