**BONUS ASSIGNMENT:**

#include<iostream>

#include<string>

using namespace std;

class engine

{

static int count;

int engine\_no;

int engine\_state;

public:

engine()

{ engine\_no=count;

count++;}

void print1();

void print();

void turneng();

};

int engine::count=1;

void engine::print()

{cout<<"engine\_no is"<<engine\_no<<endl;

}

void engine::print1()

{if(engine\_state==0)

cout<<"engine is off"<<endl;

else

cout<<"engine is on"<<endl;

cout<<endl;

}

void engine::turneng()

{cout<< "do you want to turn on the engine? (1for yes and 0 for no)";

cin>>engine\_state;

}

class luggage

{

int no\_of\_items;

double weight;

int want\_lug;

public:

luggage(){}

luggage(int ni, double wt)

{no\_of\_items=ni;

weight=wt;}

void print();

void print1();

void remove\_lug();

};

void luggage::print()

{

cout<<"no of items are:"<<no\_of\_items<<endl;

cout<<"the weight of luggage is:"<<weight<<"kgs"<<endl;

}

void luggage::print1()

{

if(want\_lug==0)

cout<<"the luggage has been put out of the car"<< endl;

else

cout<<"the luggage is in the car:"<<endl;

cout<<endl;

}

void luggage::remove\_lug()

{cout<<"do you want the luggage to be in the car? (1 for yes and 0 for no)"<<endl;

cin>>want\_lug;

}

class cars

{

double speed;

string company;

public:

cars(){}

engine e;

luggage l;

cars( string company, double speed, int no\_of\_items, double weight ) : company(company), speed(speed), l( no\_of\_items, weight)

{ }

void print();

};

void cars::print()

{

cout<<"\*\*\*\*details of car\*\*\*\*"<<endl;

this->e.print();

this->l.print();

cout<<"the speed of car is:"<<speed<<"km per hour"<<endl;

cout<<"the company is:"<<company<<endl;

this->e.turneng();

this->l.remove\_lug();

this->e.print1();

this->l.print1();

}

int main()

{

cars a("toyota", 220, 2, 28);

cars b("honda", 312, 3, 36);

cars c("hyundai", 250, 1, 21);

a.print();

b.print();

c.print();

cout<<endl;

return 0;

}

Output:

