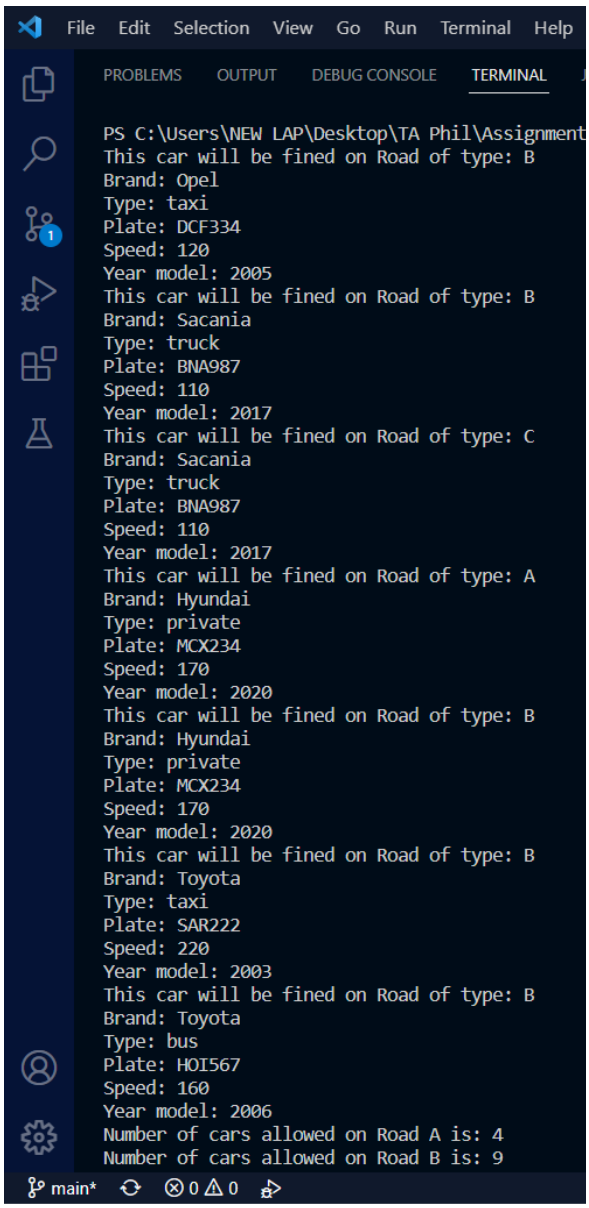
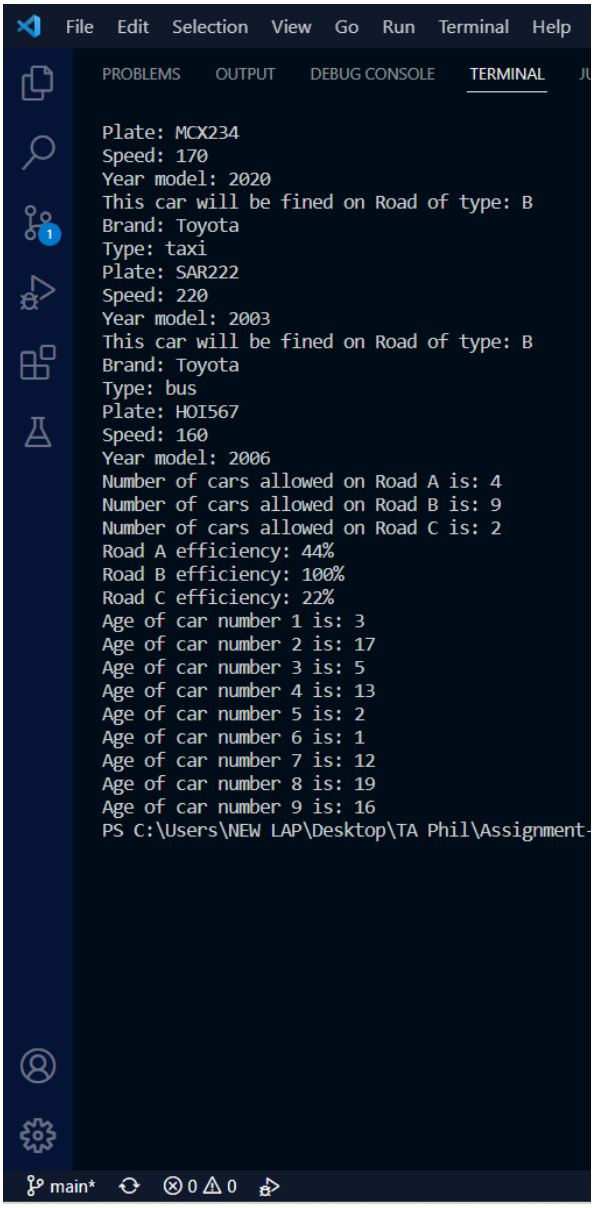
Khaled Hamza 900193940





The output displays, as shown, the cars that exceed the speed limit on the roads they are allowed on. Also, this output displays the age of the cars and the efficiency of the roads. I have used a "check" function to apply the radar function to each road and to be able to display the fines appropriately. This function allows me to fine cars exceeding their speed limits on each road specifically given their type. That was a challenge for me, and this was how I solved this problem:

```
void check(Car car,Road R,bool x){
    if(R.get_Type()=='A'&&(car.get_type() == "private" || car.get_type() == "motorcycle")){
        if(x){
            cout<<"This car will be fined on Road of type: "<<R.get_Type()<<"\n";
            cout<<"Brand: "<<car.get_Brand()<<"\n";
            cout<<"Type: "<<car.get_type()<<"\n";
            cout<<"Plate: "<<car.get_Plate()<<"\n";
            cout<<"Speed: "<<car.get_speed()<<"\n";
            cout<<"Year model: "<<car.get_model()<<"\n";
        }
    }
    else if(R.get_Type()=='C'&&car.get_type()=="truck"){
        if(x){
            cout<<"This car will be fined on Road of type: "<<R.get_Type()<<"\n";
            cout<<"Brand: "<<car.get_Brand()<<"\n";
            cout<<"Type: "<<car.get_type()<<"\n";
            cout<<"Plate: "<<car.get_Plate()<<"\n";
            cout<<"Speed: "<<car.get_speed()<<"\n";
            cout<<"Year model: "<<car.get_model()<<"\n";
        }
    }
    else if(R.get_Type()=='B'){
        if(x){
            cout<<"This car will be fined on Road of type: "<<R.get_Type()<<"\n";
            cout<<"Brand: "<<car.get_Brand()<<"\n";
            cout<<"Type: "<<car.get_type()<<"\n";
            cout<<"Plate: "<<car.get_Plate()<<"\n";
            cout<<"Speed: "<<car.get_speed()<<"\n";
            cout<<"Year model: "<<car.get_model()<<"\n";
        }

    }
}
```

This function allowed me to check the road type and the type of the car. If they match, the radar function is called as the boolean variable (x) and outputs the information of the car if the speed limit is exceeded. Notice that if the road is of type B no car type is checked because all cars are allowed on B.