OUTPUT:

```
The Age of the Vehicle is : 14

allowed to pass road A

allowed to pass road B
On Road B : HDY139 - Private - 2008 - Speed : 100
This car will be fined!

Not allowed to pass road C
On Road CHDY139 - Private - 2008 - Speed : 100
This car will be fined!


The Age of the Vehicle is : 14

Not allowed to pass road A

allowed to pass road B

allowed to pass road C


The Age of the Vehicle is : 14

allowed to pass road A
 On Road A : WOO321 - motorcycle - 2008 - Speed : 120
This car will be fined!

allowed to pass road B
On Road B : WOO321 - motorcycle - 2008 - Speed : 120
This car will be fined!

Not allowed to pass road C
On Road CWOO321 - motorcycle - 2008 - Speed : 120
This car will be fined!


The Age of the Vehicle is : 16

allowed to pass road A
 On Road A : HUD130 - Private - 2006 - Speed : 190
This car will be fined!

allowed to pass road B
On Road B : HUD130 - Private - 2006 - Speed : 190
This car will be fined!

Not allowed to pass road C
On Road CHUD130 - Private - 2006 - Speed : 190
This car will be fined!


The Age of the Vehicle is : 19

Not allowed to pass road A

allowed to pass road B
```

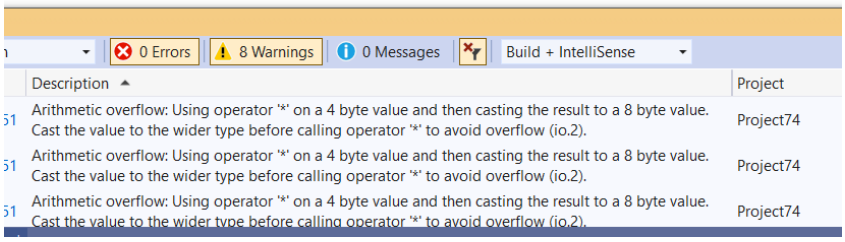
```
This car will be fined!


The Age of the Vehicle is : 19

Not allowed to pass road A

allowed to pass road B

Not allowed to pass road C


 The efficiency of Road A = 100%
 The efficiency of Road B = 100%
 The efficiency of Road C = 100%

C:\Users\Ahmad Hedaya\source\repos\Project74\Debug\Project74.exe (proces
To automatically close the console when debugging stops, enable Tools->O
le when debugging stops.
Press any key to close this window . . .
```

In the output the date is presented for each car as it is being dequeued, and is being passed through the age function, and the allow function to see which roads it's allowed on, and when passing on each road whether it is being fined or not through the use of the rader function.

The efficiency was not correctly done, and even though the calculation was carried out correctly, the count variables were not correctly retrieved, as the count for the roads was placed in the allow function, so were not properly retrieved.

```
        cout << endl << endl;

    } while (Queue.size() != 0);

    cout << endl;

    int largest;

    if (road1.getCountA() >= road2.getCountB() && road1.getCountA() >= road3.getCountC())
    {
        largest = road1.getCountA();
    }
    else
    {
        if (road2.getCountB() >= road1.getCountA() && road2.getCountB() >= road3.getCountC())
        {
            largest = road2.getCountB();
        }
        else
        {
            if (road3.getCountC() >= road1.getCountA() && road3.getCountC() >= road2.getCountB())
            {
                largest = road3.getCountC();
            }
        }
    }

    double efficiencya, efficiencyb, efficiencyc;

    efficiencya = (road1.getCountA() / largest) * 100;
    efficiencyb = (road2.getCountB() / largest) * 100;
    efficiencyc = (road3.getCountC() / largest) * 100;


    cout << " The efficiency of Road A = " << efficiencya << "%" << endl;
    cout << " The efficiency of Road B = " << efficiencyb << "%" << endl;
    cout << " The efficiency of Road C = " << efficiencyc << "%" << endl;
}
```

```
efficiencya = (road1.getCountA() / largest) * 100;
efficiencyb = (road2.getCountB() / largest) * 100;
efficiencyc = (road3.getCountC() / largest) * 100;


cout << " The efficiency of Road A = " << efficiencya << "%" << endl;
cout << " The efficiency of Road B = " << efficiencyb << "%" << endl;
cout << " The efficiency of Road C = " << efficiencyc << "%" << endl;
```




```
void allow(string Car_type)
{

    if (Road_type == 'A')
    {
        if (Car_type == "Private" || Car_type == "motorcycle")
        {
            cout << "allowed to pass road A" << endl;

            countA = countA + 1;


        }
        else
        {
            cout << "Not allowed to pass road A" << endl;

        }
    }
    if (Road_type == 'B')
    {
        if (Car_type != "")
        {
            cout << "allowed to pass road B" << endl;
            countB = countB + 1;
```