The program gave this message because it only allows A, B or C.

```
main()
{
    Road Type_a('A', 120);
    Road Type_b('K', 100);
    Road Type_c('C', 80);
```

```
C:\Users\Kirollos\OneDrive\Desktop\Assignment 1\main.exe
Enter a valid road type (A , B or C) :
```

It gave this message because the plate is not 6 digits.

```
Road Type_a('A', 120);
Road Type_b('K', 100);
Road Type_c('C', 80);
queue<Car> cars;
cars.push(Car("BMW", "private", "1234", 112, 2021));
cars.push(Car("Harly", "motorcycle", "DEL333", 90, 1998));
cars.push(Car("Volvo", "bus", "DAAA12", 60, 2009));
```

```
C:\Users\Kirollos\OneDrive\Desktop\Assignment 1\main.exe
Enter a valid road type (A , B or C) : B
The car plates should contain 3 upper alphabet and 3 numbers. (e.g ABC123)
 Renter the car plate :
```

It gave this message because the plate does not contain 3 alphabets and 3 numbers.

```
main()
{
    Road Type_a('A', 120);
    Road Type_b('K', 100);
    Road Type_c('C', 80);
    queue<Car> cars;
    cars.push(Car("BMW", "private", "1234", 112, 2021));
    cars.push(Car("Harly", "motorcycle", "DEL333", 90, 1998));
    cars.push(Car("Volvo", "bus", "DAAA12", 60, 2009));
    cars.push(Car("Fiat", "taxi", "LEG789", 99, 2001));
```

```
C:\Users\Kirollos\OneDrive\Desktop\Assignment 1\main.exe
Enter a valid road type (A , B or C) : B
The car plates should contain 3 upper alphabet and 3 numbers. (e.g ABC123)
 Renter the car plate : ABC123
The car plates should contain 3 upper alphabet and 3 numbers. (e.g ABC123)
 Renter the car plate :
```

It gave this message because the type is not private, motorcycle, bus or truck.

```
Road Type_a('A', 120);
Road Type_b('K', 100);
Road Type_c('C', 80);
queue<Car> cars;
cars.push(Car("BMW", "private", "1234", 112, 2021));
cars.push(Car("Harly", "motorcycle", "DEL333", 90, 1998));
cars.push(Car("Volvo", "bus", "DAAA12", 60, 2009));
cars.push(Car("Fiat", "taxi", "LEG789", 99, 2001));
cars.push(Car("Tyota", "truck", "Tas456", 50, 2028));
cars.push(Car("Kia", "private", "BKO852", 150, 2008));
```

```
C:\Users\Kirollos\OneDrive\Desktop\Assignment 1\main.exe
Enter a valid road type (A , B or C) : B
The car plates should contain 3 upper alphabet and 3 numbers. (e.g ABC123)
 Renter the car plate : ABC123
The car plates should contain 3 upper alphabet and 3 numbers. (e.g ABC123)
 Renter the car plate : DAA456
The car type should be bus, private, motorcycle or truck.
 Renter the car type :
```

It gave this message because the year model is not realistic.

```
main()
{
    Road Type_a('A', 120);
    Road Type_b('K', 100);
    Road Type_c('C', 80);
    queue<Car> cars;
    cars.push(Car("BMW", "private", "1234", 112, 2021));
    cars.push(Car("Harly", "motorcycle", "DEL333", 90, 1998));
    cars.push(Car("Volvo", "bus", "DAAA12", 60, 2009));
    cars.push(Car("Fiat", "taxi", "LEG789", 99, 2001));
    cars.push(Car("Tyota", "truck", "Tas456", 50, 2028));
    cars.push(Car("Kia", "private", "BKO852", 150, 2008));
    cars.push(Car("Buick", "private", "MSE589", 94, 1977));
```

```
C:\Users\Kirollos\OneDrive\Desktop\Assignment 1\main.exe
Enter a valid road type (A , B or C) : B
The car plates should contain 3 upper alphabet and 3 numbers. (e.g ABC123)
 Renter the car plate : ABC123
The car plates should contain 3 upper alphabet and 3 numbers. (e.g ABC123)
 Renter the car plate : DAA456
The car type should be bus, private, motorcycle or truck.
 Renter the car type : bus
The car plates should contain 3 upper alphabet and 3 numbers. (e.g ABC123)
 Renter the car plate : TAS456
Enter a valid year model :
```

It is the allowance of the bus on every road.

```
Road A does not allow bus vehicles.
It allows only private and motorcycle vehicles.
Road B allows all vehicles
Road C does not allow bus vehicles.
It allows only trucks.
```

It is the allowance of the truck on every road.

```
Road A does not allow truck vehicles.
It allows only private and motorcycle vehicles.
Road B allows all vehicles
Road C allows truck vehicles.
```

It is the allowance of the private on every road.

```
Road A allows private vehicles.
Road B allows all vehicles
Road C does not allow private vehicles.
It allows only trucks.
```

It is the allowance of the motorcycle on every road.

```
Road A allows motorcycle vehicles.
Road B allows all vehicles
Road C does not allow motorcycle vehicles.
It allows only trucks.
```

The fine message.

```
Car brand : Suzuki.
 Car type : motorcycle.
 Car plate : HMM458.
 Car speed : 144.
 Year model : 2017
 This car will be fined for exceeding the speed limit of road A : 120.


Car brand : Suzuki.
 Car type : motorcycle.
 Car plate : HMM458.
 Car speed : 144.
 Year model : 2017
 This car will be fined for exceeding the speed limit of road B : 100.


Car brand : Suzuki.
 Car type : motorcycle.
 Car plate : HMM458.
 Car speed : 144.
 Year model : 2017
 This car will be fined for exceeding the speed limit of road C : 80.
```

The age message.

```
Your GMC with the plate MON663 is 3 years old.
```

The number of cars passed by every road and the efficiency of every road.