```
#include <iostream>
#include "vehicle.h"
#include "manager.h"
#include <cstdlib>
#include <ctime>
#include <iomanip>

using namespace std;

manager::manager()
{
   n_vehicles = 200;
   n_trucks = 0;
   for(int i = 0; i < 200; i++)
   {
      vehicle v1;
      v_array[i] = v1;
   }
   generated = false;
}

int manager::getVehicleNum()
{
   return n_vehicles;
}

int manager::getTruckNum()
{
   return n_trucks;
```

```
}

std::string manager::getArrayType(int i)
{
   return v_array[i].getType();
}

int manager::getArrayAge(int i)
{
   return v_array[i].getAge();
}

int manager::getArrayLength(int i)
{
   return v_array[i].getLength();
}

int manager::getArrayWidth(int i)
{
   return v_array[i].getWidth();
}

int manager::getArrayMS(int i)
{
   return v_array[i].getMaxSpeed();
}

bool manager::getGenerated()
{
```

```
    return generated;
}

void manager::setTruckNum(int num_truck)
{
    n_trucks = num_truck;
}

void manager::setArrayType(int index1, std::string newString)
{
    v_array[index1].setType(newString);
}

void manager::setArrayAge(int index1, int newNum)
{
    v_array[index1].setAge(newNum);
}

void manager::setArrayLength(int index1, int newNum)
{
    v_array[index1].setLength(newNum);
}

void manager::setArrayWidth(int index1, int newNum)
{
    v_array[index1].setWidth(newNum);
}

void manager::setArrayMS(int index1, int newNum)
```

```
{
   v_array[index1].setMaxSpeed(newNum);
}

void manager::setGenerated(bool gen1)
{
   generated = gen1;
}

void manager::generateInfo(int num_truck) ///generates random numbers according to the parameters of the assignment
{
   srand(time(0));
   for(int i = 0; i < num_truck; i++)
   {
      setArrayType(i, "Truck");
      setArrayAge(i, 1 + rand() % 20);
      setArrayLength(i, 6 + rand() % 3);
      setArrayWidth(i, 2 + rand() % 2);
      setArrayMS(i, 120 + rand() % 21);
   }

   for(int i = num_truck; i < 200; i++)
   {
      setArrayType(i, "Car");
      setArrayAge(i, 1 + rand() % 20);
      setArrayLength(i, 3 + rand() % 3);
      setArrayWidth(i, 1 + rand() % 2);
      setArrayMS(i, 140 + rand() % 61);
```

```
    }
}

void manager::printVehicleInfo() ///prints all of the vehicles within the vehicle array
{
    for(int i = 0; i < 200; i++)
    {
        std::cout << "Type: " << getArrayType(i) << "  Age: " << getArrayAge(i)
        << "  Length: " << getArrayLength(i) << "  Width: " << getArrayWidth(i) << "  Max Speed: "
        << getArrayMS(i) << endl;
    }
}
```