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**Course Name:** Advanced System Analysis and Software Design

**Course Code:** ENSF 614

**Assignment Number:** Lab 04

**Submission Date:** 07/10/2025

Exercise A

UML Diagram (Created with Astah UML):

A diagram of a computer program

Description automatically generated

Exercise B

UML diagram:

A diagram of a diagram

Description automatically generated

Exercise C

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\* File Name: EXC.cpp

\* Assignment: Lab 4 Exercise C

\* Lab Section: B01

\* Completed by: Jack Shenfield & William Watson

\* Submission Date: Oct 7, 2025

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// Class declaration similar to a .h file

using namespace std;

#include <string>

class Resizeable{

public:

void enlarge (int n)=0;

void shrink (int n)=0;

};

class Vehicle: public Resizeable, public Removeable{ // this class is abstract

protected:

string name;

public:

Vehicle(string name);

virtual void move() = 0; // pure virtual

};

class Car final : public Vehicle{

private:

int seats;

public:

void turn();

};

class Moveable{

public:

void forward()=0; // pure virtual

void backward()=0; // pure virtual

};