

BEAUTY MAZENGE

ICT 2622

ASSIGNMENT 2

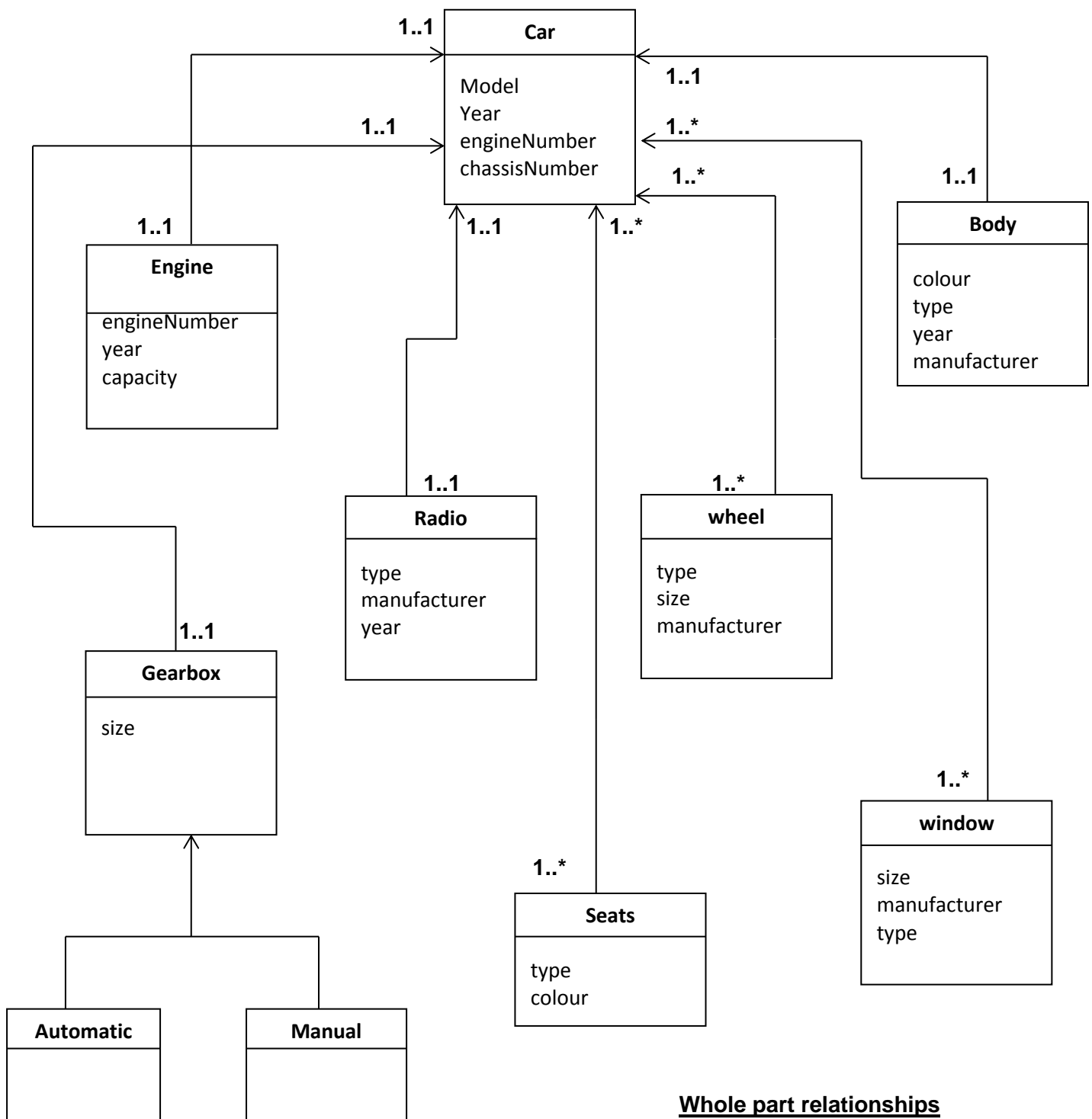
UNIQUE 757864

Question 1

Use case vs domain class	Driver Data	Ticket Data	Officer Data	Court Data
Record Officer information			R	
Request Driver information	R			
Create Ticket Record	C	C		
Process fine	R	U		
Process claim	U			
Enter payment information	U	U		
Generate warrant request notice	U	U	U	C
Record verdict and trial date	U	U		R
Archive record				UD

Question 2

Domain model class for a car and its parts



Whole part relationships

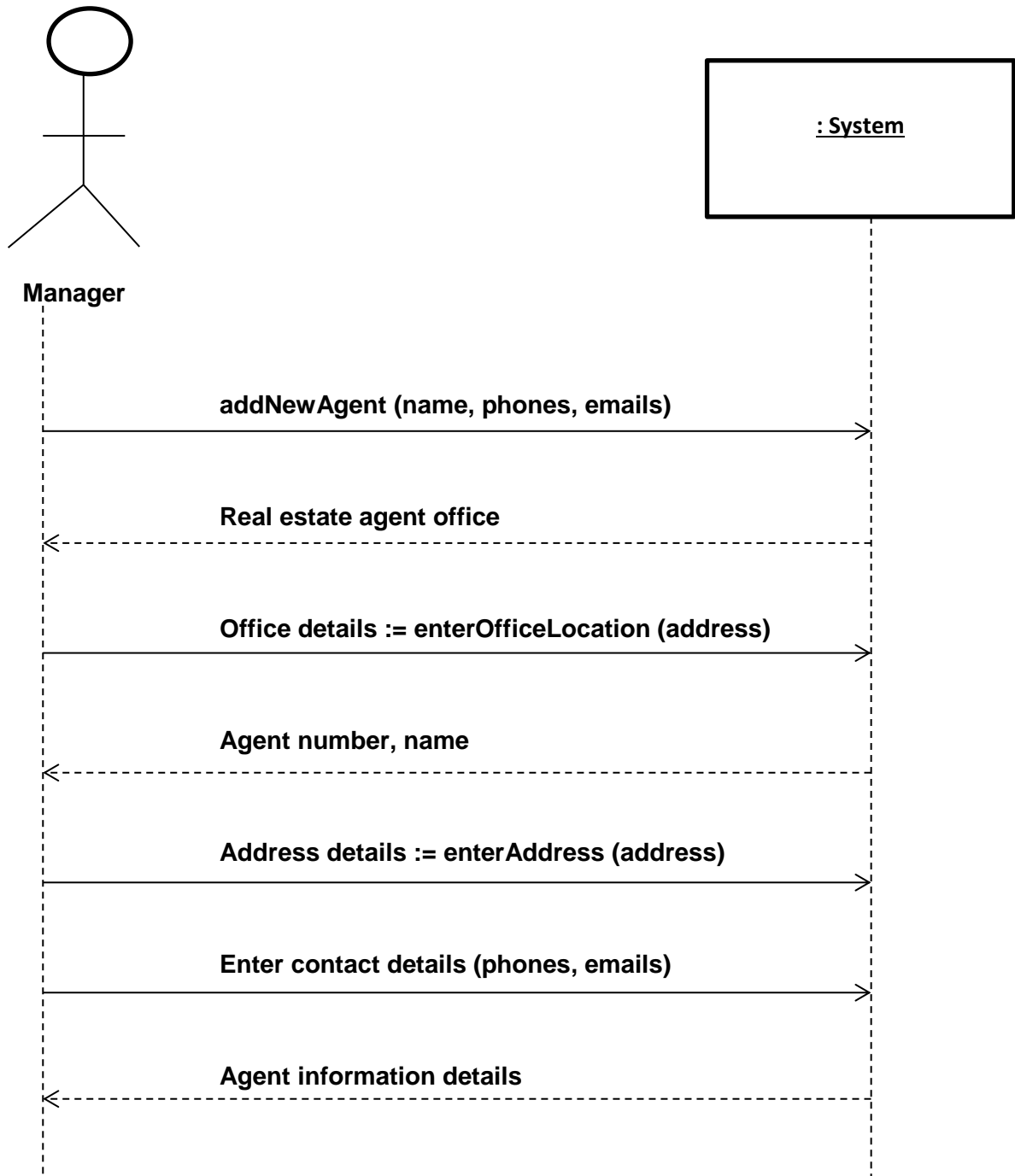
Car and Engine
Car and Radio
Car and gearbox
Car and Wheels

Question 3

Fully developed use case for Add agent

Use case name:	Add agent	
Scenario:	Add an agent to real estate office	
Triggering event:	Real estate office wants to add agent to its offices	
Brief description:	Estate agent receives new listings, find an additional agent and add to the real estate agent	
Actors:	Agent Manager	
Related use case:	None	
Stakeholders:	listingOwner	
Preconditions:	New listing must be exist Agent must exist	
Post conditions:	An agent must be created and saved	
Flow of activities:	Actor	System
	1. Agent Manager indicates the desire to add a new agent to the real estate office. 2. Manager indicate the real estate office to add the agent 3. Manager enters the add address 4. Manager enters contact details	1.1 System promotes for the real estate office to add the agent 2.1 System creates a new agent 2.2 System prompts for agent address 3.1 System creates agent address 3.2 System prompts for contact details 4.1 System creates Agent number 4.2 System associates agent to the real estate office 4.3 System associates agent to new listings
Exception conditions:	3.1 The area code is invalid 4.2 Real estate agent office is not valid	

System Sequence Diagram



Question 4

The components for message syntax in a communication diagram are

[true/false condition] sequence-number: return value:= message-name (parameter-list)

[] indicate a true/ false condition i.e. the test condition which is tested before the message is sent.

Sequence-number – indicates the order of the messages.

Return-value is used to describe the data being returned from the destination object to the source object in response to the message

:= is used to denote that a return value exists

Message-name is the description of the requested service.

Parameter-list shows the data parameters that are passed with the message.

The syntax message in a communication diagram include a sequence number which indicates the order of the messages because there is no lifeline which shows the passage of time during a scenario unlike in the sequence diagram.

Question 5

Risk factors associated with database design are:

Architecture – database design architecture is tightly integrated with other architectural decisions, that is, include network design, web and component services and security.

Existing databases – the new and upgraded systems might not be compatible with the existing databases with their pre-existing constraints therefor analysts must ensure continued operation when adapting to new or upgraded systems.

Domain model class diagram – database design cannot proceed until related parts of the class diagram have been developed.

Other risks include the design flaws, programming bugs and associated programs and systems thereby creating various security vulnerabilities, data loss and corruption and performance degradation.

Database design is also associated with high costs risks. It may require huge investments in hardware and software, training of personnel and backup and recovery system

There are also high risks of system failure which might mean users to have to wait for the system to be restored or permanent damage might occur to the database rendering unavailability of data.

Security threats are also risks associated with database design. The security threats include unauthorized/unintended/misuses of data.