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Assignment – 1

(Based on Unit I and Unit II)

MCA-II Semester

Course Code: MCA 104

Course Name: Object Oriented Software Engineering

Q 1.	Elaborate how does object oriented design methodology employ use cases in software design.
Q 2.	Evaluate through a suitable example, how object oriented design methodology employs use cases in software design?
Q 3.	Detail the major elements or building blocks of the UML?
Q 4.	Contrast traditional software development life cycle models with their object oriented counterparts?
Q5.	<p>The I.T. department of a medium-sized consulting firm requires an inventory system. This system would allow them to individually track every piece of computer equipment used by the company. This includes computers, monitors, printers, etc. This is especially important given that the company has several offices located across North America.</p> <p>The system should keep track of the following characteristics of equipment:</p> <ul style="list-style-type: none">• Its type (such as Computer, Monitor, Printer)• Its serial number (such as N3JEKW357EA)• Its model number• Information about its purchase (such as date, store, warranty expiration)• Who is currently assigned to this piece of equipment• Its location (such as Montreal Office, Toronto Office) <p>In addition,</p> <ul style="list-style-type: none">• Every piece of computer equipment that needs to be tracked has a special bar code sticker on it which uniquely identifies it in the system. This bar code is a random unique number assigned by the system.• A piece of equipment can only be assigned to one employee at a time. <p>The system also keeps track of employees. Although not as complete as a Human Resources (HR) system, it does record the following information :</p> <ul style="list-style-type: none">• Name of the employee• Employee gender (male/female)• His/her title• His/her department• His/her supervisor• His/her location (such as Montreal Office, Toronto Office)• His/her coordinates (such as address, phone, cell)• List of pieces of equipment currently assigned to him/her• List of pieces of equipment assigned to him/her in the past (and when !) <p>Some information about locations is also stored :</p> <ul style="list-style-type: none">• Name of the location• Number of offices in that location• List of (references to) employees in that office• Employee responsible for I.T. maintenance at that office and his/her coordinates• List of equipment found at that location

	Task : Draw a UML class diagram to model the above inventory system.
Q6.	“System development is a complex task.” Justify how can this complexity be handled in an organized way?
Q7.	Justify the statement, “The Unified Process is an adaptive system development methodology”?
Q8.	Through a suitable example, explain the aim and objective of the analysis phase and how it is realized?
Q9.	Consider an online airlines reservation system: a. Identify the actors. One use case is to make a flight reservation. List four additional use cases at a comparable level of abstraction? b. Prepare a use case diagram for this system?
Q10.	Justify the importance of inception phase in Object Oriented software development?
Q11.	Elaborate the various roles a project manager may have to play while managing a project?