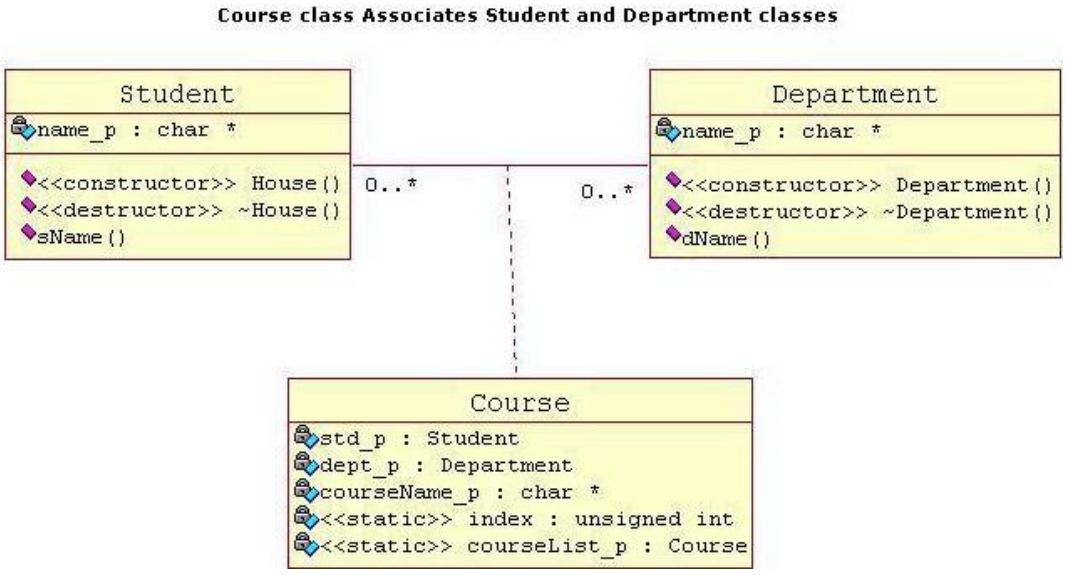
Software Development Lab – II [15B17CI271]
Assignment Sheet
Week 6A

COURSE OUTCOMES		COGNITIVE LEVELS
C173.1	Write programs in C++ to implement OOPs concepts related to objects, classes, constructor, destructor, and friend function.	Apply Level (Level 3)
C173.2	Write programs in C++ using OOPs concept like encapsulation, inheritance, polymorphism and abstraction.	Apply Level (Level 3)
C173.3	Write programs in C++ using Standard Template Library.	Apply Level (Level 3)
C173.4	Perform exception handling in C++ programs.	Apply Level (Level 3)
C173.5	Write MySQL queries to perform operations like ADD, DELETE, UPDATE, SELECT on relational databases.	Apply Level (Level 3)

Note: Students are advised to submit their solutions to respective lab faculty. The solution file must be named as "rollno_first name_w6A.doc" (here w6A represents week 6A).

1. Multiple students can associate with a single Department and single student can associate with multiple Departments, but there is no ownership between the objects and both have their own lifecycle. Both can create and delete independently.

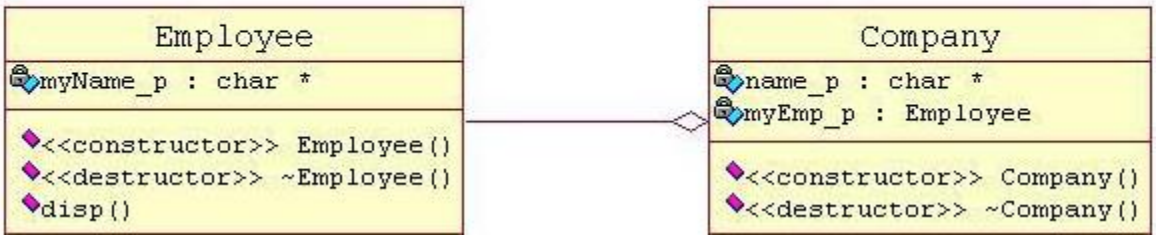
   WAP in C++ to model the relationships.



2. A single Employee can not belong to multiple Companies (legally!!), but if we delete the Company, Employee object will not destroy.

   WAP in C++ to model the relationships.

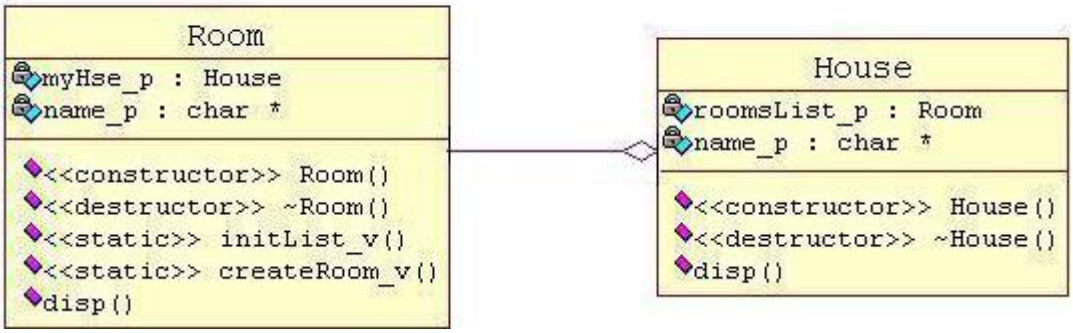
Employee class has Agregation Relatioship with Company class

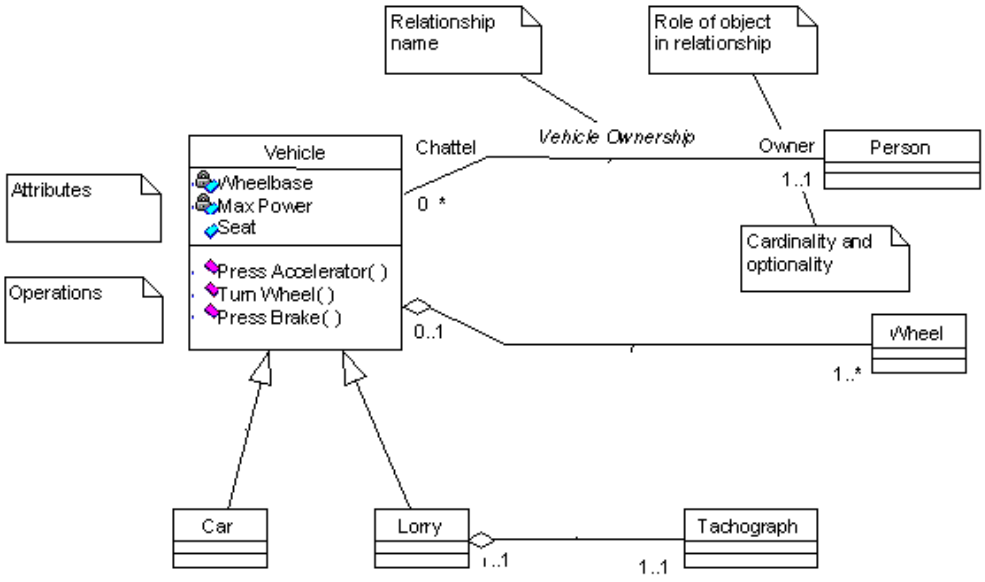


3. House can contain multiple rooms. There is no independent life for room and any room can not belong to two different houses. If we delete the house, room will also be automatically deleted.

WAP in C++ to model the relationships.

Room class has Composition Relationship with House class





Refer to the UML diagram above and do the following:

Q4) Write a code in C++ to model the Vehicle class, showing its functions and attributes.

Q5) Write a code in C++ to model aggregation relationships in the given diagram.

Q6) Write a code in C++ to model Inheritance amongst different classes above.

Q7) Write a code in C++ to show the association relationship between classes shown above.