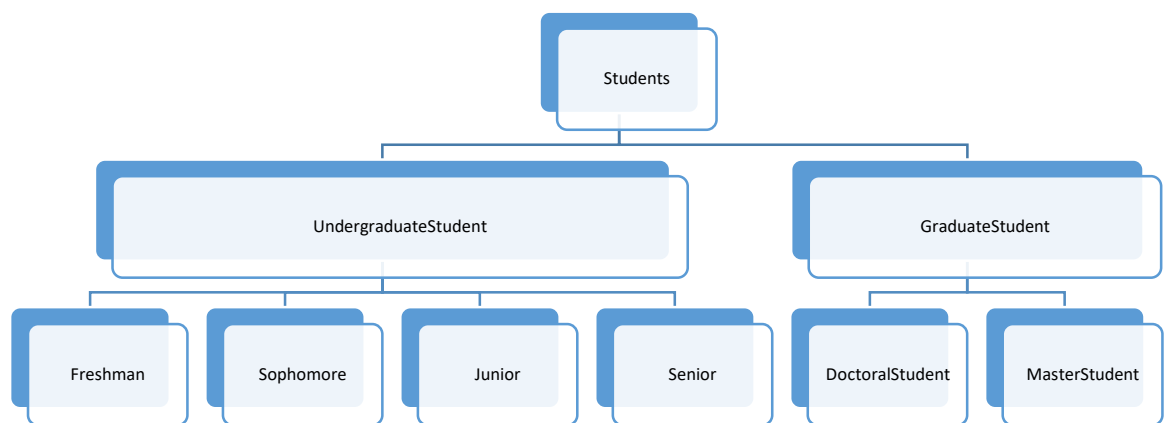


1. (1) True  
(2) False, an is-a relationship is implemented by inheritance but not composition. The has-a relationship is implemented by composition.  
(3) False, Student has composition of Faculty and Course Class, thus Student is has-a relationship with of Faculty and Course Class.  
(4) True  
(5) True



2. Student class inherits UndergraduateStudent class and GraduateStudent class. Under the UndergraduateStudent class, there are four classes of students inherits from this class, which are Freshman class, Sophomore class, Junior class, and Senior class. Similarly, under GraduateStudent class, there are DoctoralStudent class and MasterStudent class inherit from this class. The relationships between this class are listed:

- An undergraduate student is a student.
- A graduate student is a student.
- A freshman is an undergraduate student and a freshman is also is a student.
- A sophomore is an undergraduate student and a sophomore is also a student.
- A junior is an undergraduate student and a junior is also a student.
- A senior is an undergraduate student and a senior is also a student.
- A doctoral student is a graduate student and a doctoral student is also a student.
- A master student is a graduate student and a master student is also a student.