***This Case is from Systems Analysis and Design – An Object Oriented Approach with UML, 5th edition, Alan Dennis et. al., Wiley – 2015:***

For the following mini case -

1. Write a 1 paragraph summary of a software solution for this business.
2. Develop a list of functional (use-cases) requirements. One-line descriptions.
3. Develop a list of domain actors.
4. Develop a list of domain objects - conceptual or physical classes to be modelled.
5. Develop a UC diagram for a subset of the use-cases presented above.
6. Understand the relationships (is-a, has-a, uses-a) between domain objects and create class-diagram.
7. For one use-case create a Sequence Diagram that involves the objects from the classes developed.
8. Develop a glossary of terms pertinent to the system to be developed

**MINI-CASE**

Professional and Scientific Staff Management (PSSM) is a unique type of temporary staffing agency. Many organizations today hire highly skilled technical employees on a short-term, temporary basis to assist with special projects or to provide a needed technical skill. PSSM negotiates contracts with its client companies in which it agrees to provide temporary staff in specific job categories for a specified cost. For example, PSSM has a contract with an oil and gas exploration company in which it agrees to supply geologists with at least a master’s degree for $5,000 per week. PSSM has contracts with a wide range of companies and can place almost any type of professional or scientific staff members, from computer programmers to geologists to astrophysicists.

When a PSSM client company determines that it will need a temporary professional or scientific employee, it issues a staffing request against the contract it had previously negotiated with PSSM. When PSSM’s contract manager receives a staffing request, the contract number referenced on the staffing request is entered into the contract database. Using information from the database, the contract manager reviews the terms and conditions of the contract and deter-mines whether the staffing request is valid. The staffing request is valid if the contract has not expired, the type of professional or scientific employee requested is listed on the original contract, and the requested fee falls within the negotiated fee range. If the staffing request is not valid, the contract manager sends the staffing request back to the client with a letter stating why the staffing request cannot be filled, and a copy of the letter is filed. If the staffing request is valid, the contract manager enters the staffing request into the staffing request database as an outstanding staffing request. The staffing request is then sent to the PSSM placement department.

In the placement department, the type of staff member, experience, and qualifications requested on the staffing request are checked against the data-base of available professional and scientific staff. If a qualified individual is found, he or she is marked “reserved” in the staff database. If a qualified individual cannot be found in the database or is not immediately available, the placement department creates a memo that explains the inability to meet the staffing request and attaches it to the staffing request. All staffing requests are then sent to the arrangements department.

In the arrangements department, the prospective temporary employee is contacted and asked to agree to the placement. After the placement details have been worked out and agreed to, the staff member is marked “placed” in the staff database. A copy of the staffing request and a bill for the placement fee is sent to the client. Finally, the staffing request, the “unable-to-fill” memo (if any), and a copy of the placement fee bill are sent to the contract manager. If the staffing request was filled, the contract manager closes the open staffing request in the staffing request database. If the staffing request could not be filled, the client is notified. The staffing request, placement fee bill, and unable-to-fill memo are then filed in the contract office.