

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 determines 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.

1. Summary

1 paragraph here

2. Use-Cases:

UC1: Client sends a staffing request

Client issues a staffing request against a previous contract used.

UC2: Contract Manager receives a staffing request

The Contract Manager selects a staffing request and sees its corresponding info.

UC3: Contract Manager validates staffing request

Using the Database, Contract Manager checks that the Staffing Request meets the terms and conditions of the client contract.

UC4: Contract Manager accepts staffing request

Contract manager enters staffing request into database as outstanding staff request which is forwarded to the placement department.

UC5: Contract Manager denies staffing request

Contract Manager finds staffing request invalid and copy letter of invalidity is sent to the database and client.

UC6: Placement Department finds qualified staff

Staff requested checked against database and marked as reserved

UC7: Placement Department finds no qualified staff

Staff requested against database and placement department creates memo to send to arrangements department about no qualified staff.

UC8: Placement Department sends all staffing requests to Arrangements Department

Staffing requests get sent along with any attachments.

UC9: Arrangements Department finds Staff Member valid

Prospective employee asked to agree to placement.

UC10: Arrangements Department works out agreement with Staff Member

The actor selects the Staff Member and marks them “placed” in the database

UC11: Arrangements Department finds Staff Member invalid

A copy of the staffing request and a bill for the placement fee is sent to the Client. The staffing request, the “unable-to-fill” memo (if any), and a copy of the placement fee bill are sent to the Contract Manager.

UC12: Arrangements Department staffing request was filed

Contract Manager closes open staffing request in database.

UC13: Arrangements Department staffing request was not filed

The Client is notified. The staffing request, placement fee bill, and unable-to-fill memo are then filed in the contract office.

3. Domain Actors

PSSM

Database

Employee

PSSM Placement Department

Arrangements Department

Contract Manager

Contract Office

Client

4. Domain Objects

Document

Staffing Request

Contract

Letter

Memo

Bill

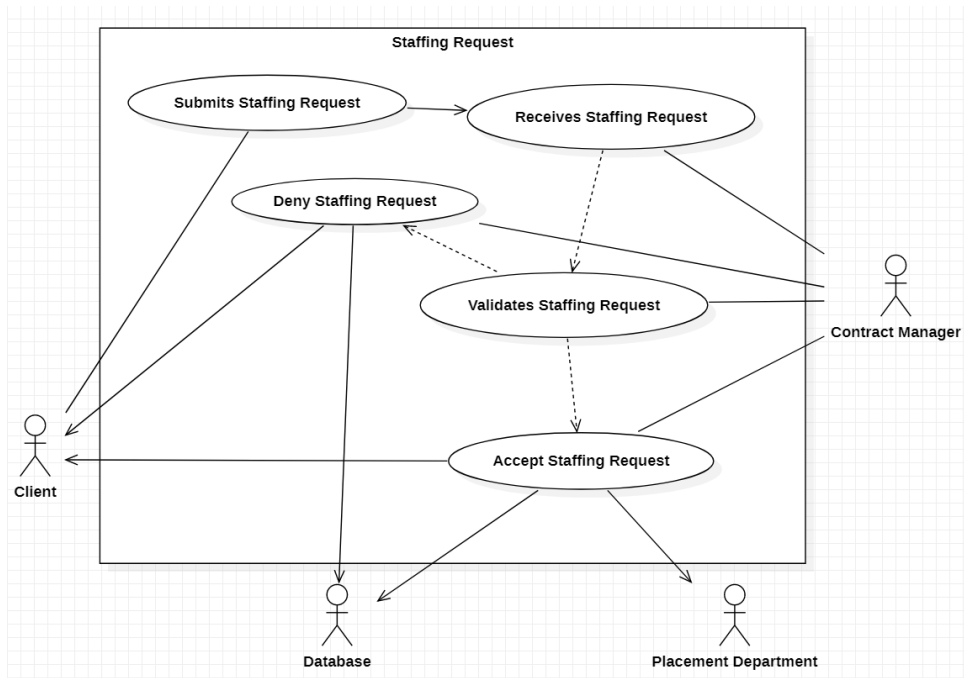
User

Employee

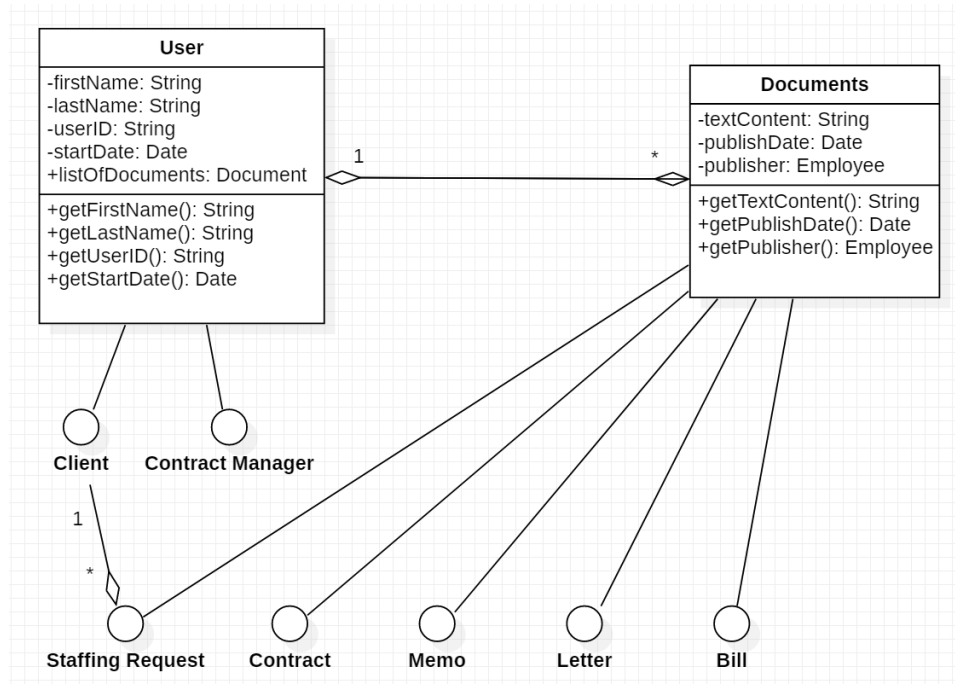
Contract Manager

Client

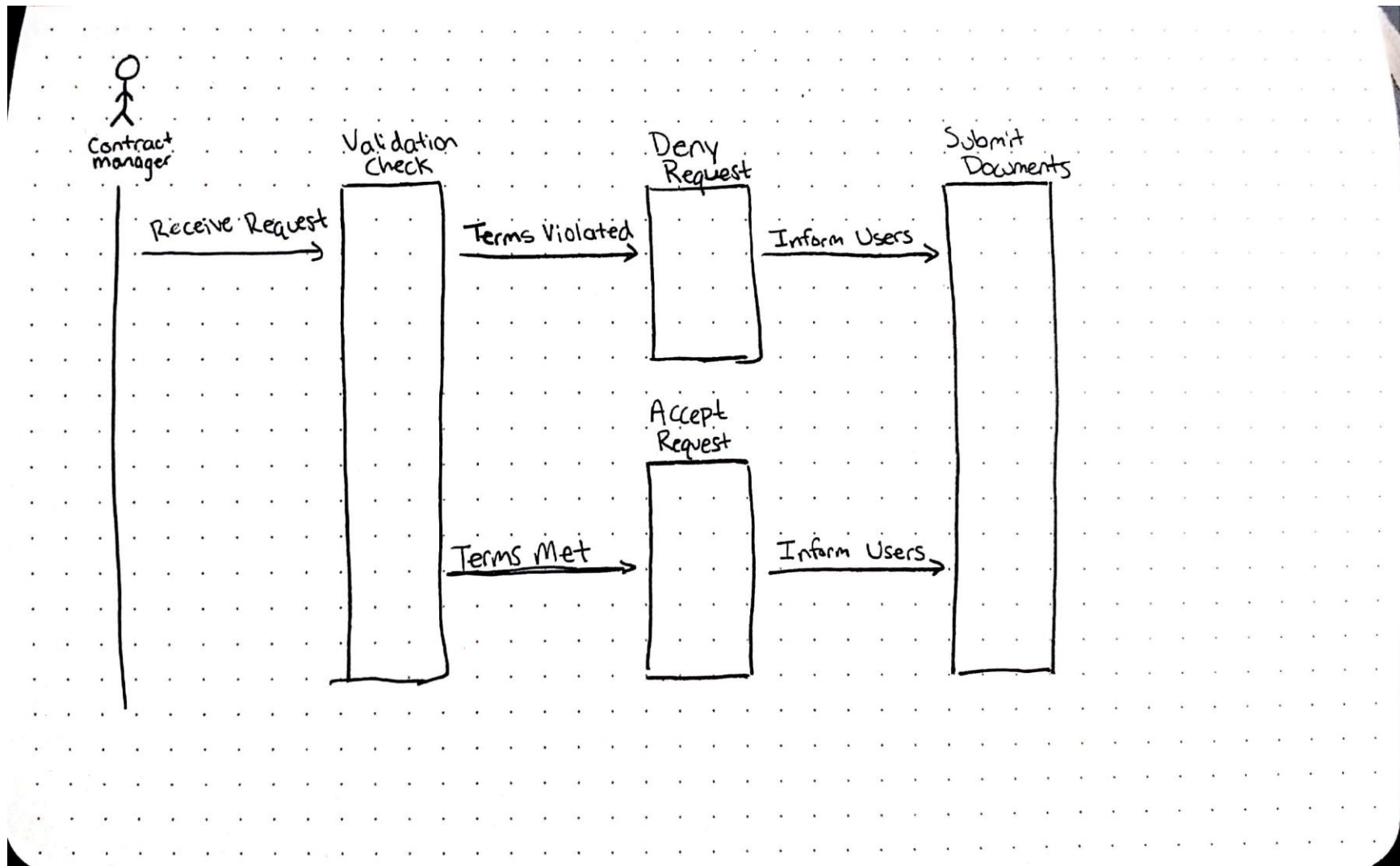
5. UC Diagram



6. Class Diagram



7. One Use Case Sequence Diagram



8. Term Glossary

- a. Professional and Scientific Staff Management (PSSM) – type of staffing agency

- b. Client – a user that requests staffing for project
- c. Staffing request – a request for a potential employee with technical skills necessary for a specific project
- d. Contract Manager – a manager that reviews terms and conditions of contracts and validates or denies staffing requests accordingly
- e. Placement Department – uses database to check professional and scientific staff availability according to criteria in staffing requests
- f. “Reserved” (in staff database) – qualified individual is found
- g. Memo – individual not found or not available immediately, note is attached to staffing request with explanation and is sent to the contract manager
- h. Arrangement Department - contact employees and ask to agree to placement
- i. “Placed” (in staff database) - employee agrees to placement
- j. Bill – placement fee sent to client
- k. Contract office – location of filed staffing request, placement fee bills, and memos