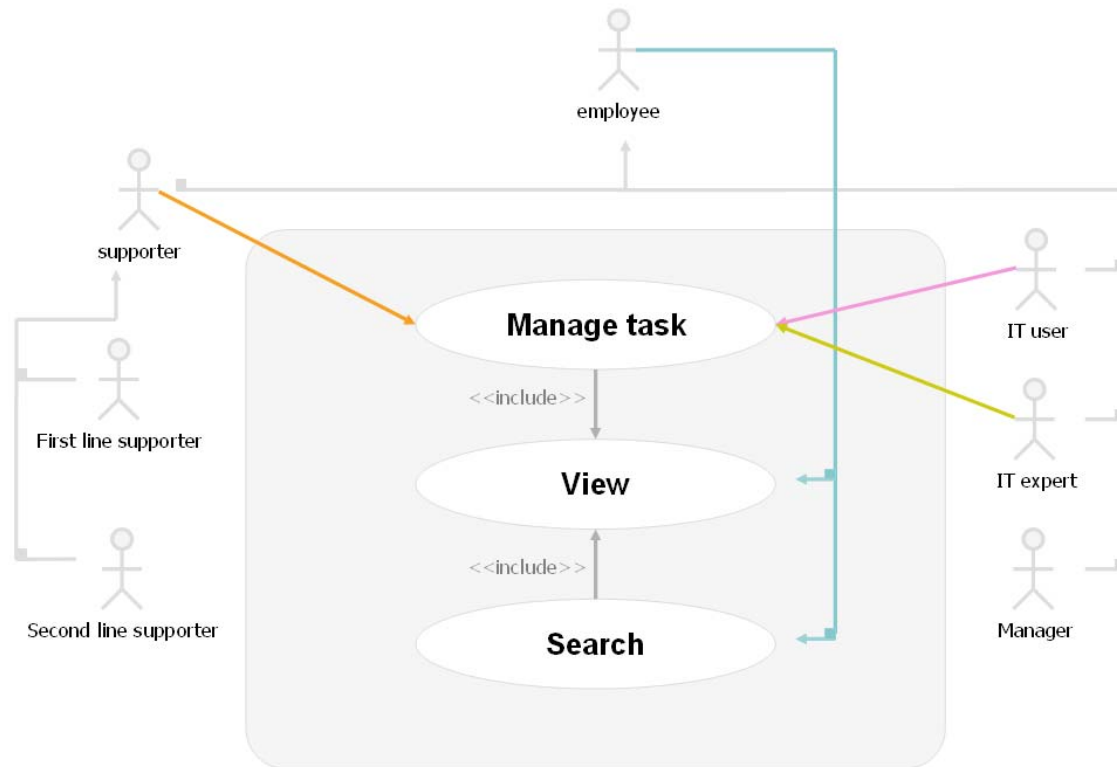


# Requirements specification for Hotline Support System

Author: Mohammad Amin Kuhail

## Definitions:

1. **Active task:** To a supporter, an active task is one of the tasks he is currently taking. To an IT expert, it is one of the tasks he is associated with. To an IT user, it is one of the tasks he requested but are not handled yet.
2. **Task information:** ID, status, request date and time, close date and time, request sender, acting(supporters as well as IT experts who acted/currently acting and when they acted), description, external information, estimated time, real time, times of opening, priority, log.
3. **Task Progress:** Percentage of the remaining time of the task handling estimated time against the its full time.
4. **Task status:** First line, Second line, old first line, old second line, Taken, Parked, Reminder, Closed, Left, and Reopened.
5. **Reopened:** Task has been opened again by an IT user. Once its reopened, system warns the acting supporter about it.
6. **Old first line:** A task was handled by a first line supporter. Reopened by its requester, forwarded again to first line supporters because the last supporter is not available.
7. **Old second line:** A task was handled by a second line supporter. Reopened by its requester, forwarded again to second line supporters because the last supporter is not available.
8. **Who is associated with a task ?** All supporters and IT experts who have worked on it. The IT user who requests it.
9. **Task log:** (1) History of task descriptions associated with names of employees who added or edited them. (2) pieces of external information.



**Figure 1:** General use case

Figure 1 shows a general use case for the hotline support system. These general use cases are explained below:

#### **Use case 1: Manage task:**

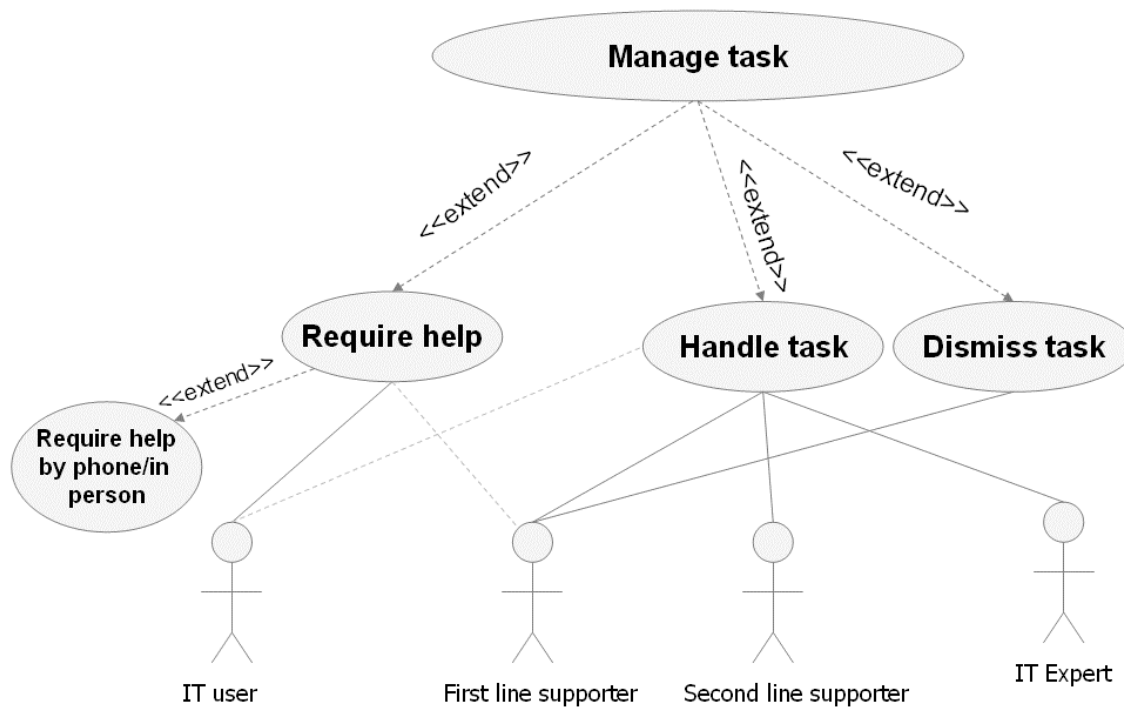
**Description:** This is a general use case for managing a task. A task is basically an IT user's request. These tasks can be added, handled, edited, or dismissed. IT users can send a request, which can be then modified as a task by supporters. First line supporters add, edit, handle, or dismiss tasks. Second line supporters can edit and handle them. Unclosed can receive additional information. System keeps all contributions and editions made on a task in a task log.

#### **Use case 2: View**

**Description:** First line supporters can view tasks they previously added, or are currently working on. Second line supporters can view tasks forwarded to them by first line supporters as well as the tasks they worked on before. IT users can follow up the progress of tasks they originated and can view/contact the supporter working on it. IT experts can view description of tasks forwarded to them as well as their urgency. They can also view/contact all people associated with the Task Managers can view all tasks and all information associated with them.

#### **Use case 3: Search**

**Description:** First line supporters can search for tasks they previously added, or are associated with. Second line supporters can search for tasks they've worked on or are associated with. IT users can search for tasks they originated. IT experts can view descriptions of tasks forwarded to them as well as their urgency. Managers can search for all tasks and all information associated with them.



**Figure 2:** Manage Task

### Use case 1.1: Require help

**Primary Actors:** IT user

**Secondary Actors:** First line supporters

**Main Success Scenario:**

1. IT user logs on his pc.
2. IT user types in his request.
3. IT user sends it as an email to hotline@.
4. System confirms the sending of the email.
5. System adds IT user's request as a task of a first line status. IT user can check it later for knowing its progress .

**Exceptions:**

1.1. In case IT user forgot his password, he could can report his problem to first line supporters by phone or in person (See use case 1.1.1: Require help by phone/in person)

3.1. In case there is a connection problem, IT users can report their problem to first line supporters by phone or in person (See use case 1.1.1: Require help by phone/in person)

**Extensions:**

1-5.: IT users can choose to report their problem to first line supporters by phone or in person (See use case 1.1.1: Require help by phone/in person)

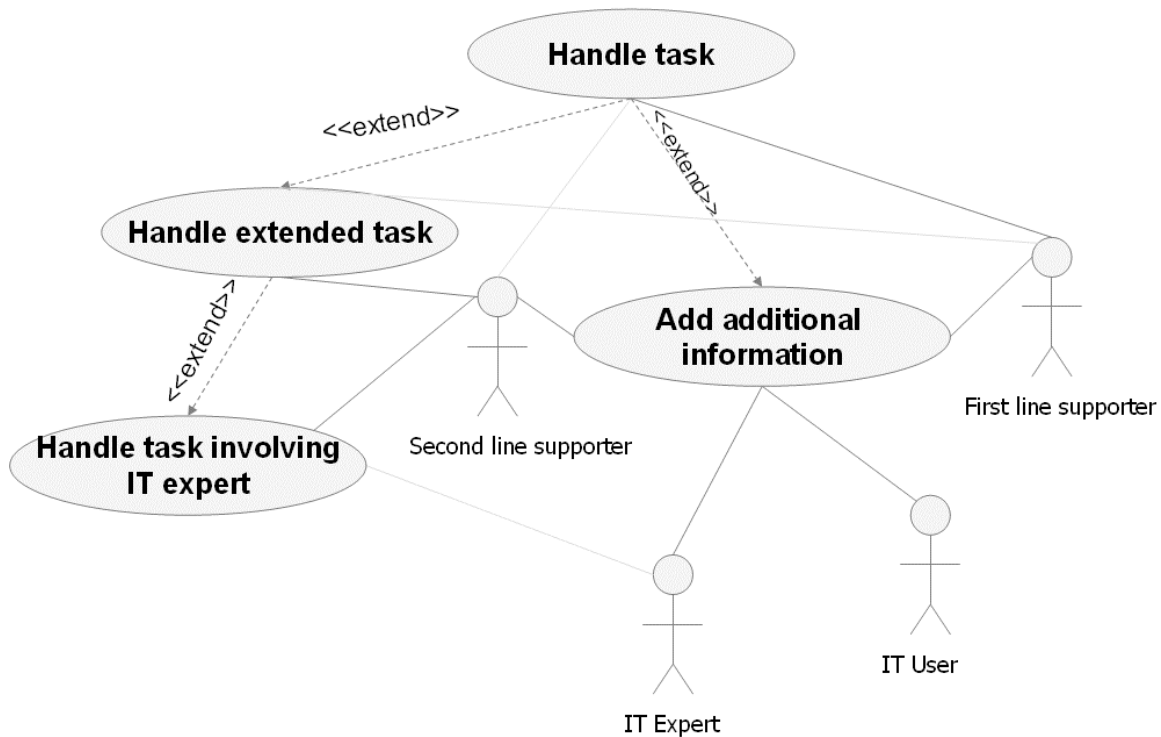
**Use case 1.1.1: Require help by phone/in person**

**Primary Actors:** IT user

**Secondary Actors:** First line supporters

**Main Success Scenario:**

1. IT user phones or goes in person to a first line supporter.
2. IT user reports the problem orally.
3. First line supporter adds the task (through add task use case).
4. System adds IT user's request as an unresolved active task of him where IT user can check it later for knowing its progress.



**Figure 3:** Handle Task

### Use case 1.2: Handle task

**Primary Actors:** First line supporters.

**Secondary Actors:** Second line supporters.

**Trigger:** A first line supporter decides to handle a first line task

#### Main Success Scenario:

1. First line supporter checks a first line/old first line task sent to first line supporters by email.
2. System sets the task status as taken by the supporter.
3. First line supporter classifies it (if possible)/reclassifies it if necessary, re-describes it(if necessary). However, system keeps the original description in task log. At this point the task contains the following pieces of the information (task ID, request sender, description, classification, time and date of request).
4. First line Supporter does what it's necessary probably by contacting the request sender by phone or by email telling him how to resolve the problem.
5. First line supporter edits the task description or any other associated pieces of task information if necessary.
6. First line supporter closes the task.
7. System sets the task status as handled. The time the task is handled at is added as well.

**Extensions:**

2.1. If the request is taken by phone/in person, first line supporter writes its description by himself.

2.2. First line supporter adds the time and date of request entry, and request sender.

2.3. First line supporter classifies request if possible.

2.4-7. 4-7 in main success scenario.

4.1. If first line supporter realizes the task can't be resolved right away, he priorities it.

4.2. If sure, first line supporter estimates time of task handling.

4.3. First line supporter forwards it to the pool of second line supporters or a specific second line supporter.

4.4. System sets the task status as Second line.

1-4: at any time any of the people associated with the task could add additional information using use case 1.3.2 add additional information. Alternatively, supporter could contact people associated with the task to clarify some points. Thus, the supporter re-evaluates the task based on the new information and acts accordingly.

**Exceptions:**

3-4.1: If supporter logs out(for example because he has to join second line supporters), system sets task status as old first line and forwards it to first line supporters as a request that has been worked on before.

7.1. If the request sender, however, still experiences a problem, he can reopen the task.

7.2. System sets the task status as reopened.

7.3. System notifies supporters who are associated with it.

7.4. Once a supporter retakes it, task status is changed into Taken.

7.3. Supporter reevaluates the task. Step 2-5 main success scenario.

**Nested Exceptions:**

3-4.1.1 On logging out, if the system finds out that no other first line supporter is available, system warns him before he logs out. If he insists on logging out, system warns other second line supporters.

7.3.1. If none of the supporters who worked on it is available, system sets its status as old first line, and forwards it to first line supporters as a request that has been worked on before.

**Use case 1.3.1: Handle extended task**

**Primary Actors:** Second line supporters.

**Secondary Actors:** First line supporters, IT experts.

**Trigger:** A second line supporter decides to handle an extended task

**Assumption:** The task to be handled is forwarded by a first line supporter.

**Main Success Scenario:**

1. Second line Supporter accesses one generally sent second line tasks (or a task that is particularly sent to him) based on priority (through [view tasks](#)).
2. Second line supporter evaluates the task, edits its bits of information if possible (e.g. estimated time, description, required resources). However, system keeps old versions of the task old bits of information in the task log.
3. Second line supporter handles the task (for example by leaving his office and resolving the problem at the request sender's office).
4. Second line supporter edits/adds task's bit of information if necessary.
5. Second line supporter closes the task.
6. System sets the task status as closed.

**Extensions:**

3.1.1. If task requires external resources, supporter sets the task status as parked, and type in the resources it requires.

3.1.2. Supporter estimates time of the task (once he knows when these resources will be available).

3.1.3. Once the resources are available, supporter resolves the task.

3.1.4-6. Step 4-6 main success scenario.

3.2.1. If task requires an IT expert involvement, see [use case 1.3.1.1 handle task involving IT expert](#)

**Exceptions:**

3.2.1. If task is not handled in time the supporter estimated, system sets task status as reminder.

3.2.2. System warns acting supporter about the task.

**Nested Exception:**

3.2.2.1. If the warned supporter is not available, system sets its status as old second line.

3.3.1. If acting supporter moves to first line or goes on holiday without closing the task, system sets its status as old second line and forwards it as a request to second line supporters.

Extension 3.1.3.1. If the resources are not available on time estimated by supporter, system sets the task status as reminder.

Extension 3.1.3.2. System warns acting supporter about the task.

**Nested Exception:**

3.1.3.2.1. If the warned supporter is not available, system sets its status as old second line.

**Use case 1.3.1.1: Handle task involving IT expert**

**Primary Actors:** Second line supporters.

**Secondary Actors:** First line supporters, IT experts.

**Trigger:** A second line supporter decides to handle an extended task

**Assumption:** The task to be handled is forwarded by a first line supporter.

**Main Success Scenario:**

1. Second line supporter forwards the task to an expert who is specialized in the area of the problem.
- 2.. Supporter communicates with the IT expert(either by phone or in person), explain the task details to him.
3. IT expert reads and then edits task information if necessary.
4. IT expert resolves the problem (For example by going to the request sender's office).
6. IT expert/second line supporter edits task information if necessary.
7. Second line supporter closes the task. (If IT user faces problems see use case 1.3 Exception 5.1-3).

**Extensions:**

2-3: If task understanding requires communicating with associated supporters, both second line supporter and IT expert can communicate with task them (by system, phone, or in person.).

4. If task requires external resources (see use case 1.3.1 Extension 3.1 ).

**Use case 1.3.2: Add additional information**

**Primary Actors:** Second line supporters.

**Secondary Actors:** First line supporters, IT experts, IT users.

**Trigger:** An actor wishes to add additional information to a task.

**Assumption:** The actors who can add additional information to a task are only those who are associated with it. They could be first line supporters, IT experts, or IT users.

**Main Success Scenario:**

1. Actor selects one of his active tasks.
2. Actor adds additional information to the task.
3. System saves that information in task log.
4. System warns supporter as well as IT expert working on the task.
5. Based on new information, IT expert or supporter re-handles the task through handle use case/handle extended use case.