Diagram boxes and labels:
- Control panel → (User command and data) → SecureHome Software
- SecureHome Software → (Display information) → Control panel display
- SecureHome Software → (Alarm type) → Alarm
- Sensors → (Sensor status) → SecureHome Software
- SecureHome Software → (Telephone number tones) → Telephone line

2. The SecureHome security framework is illustrative of numerous PC based items and frameworks. The item screens this present reality and responds to changes that it experiences. It additionally connects with a client through a progression of composed sources of info and alphanumeric display.
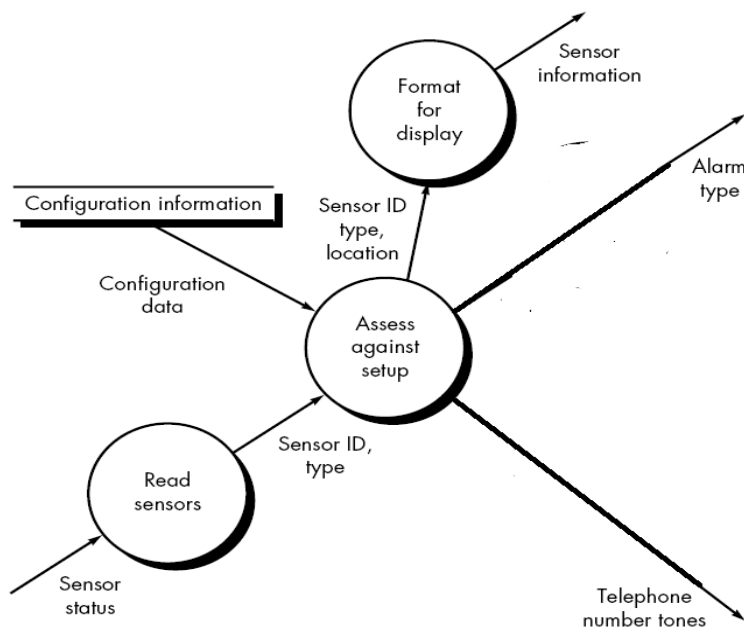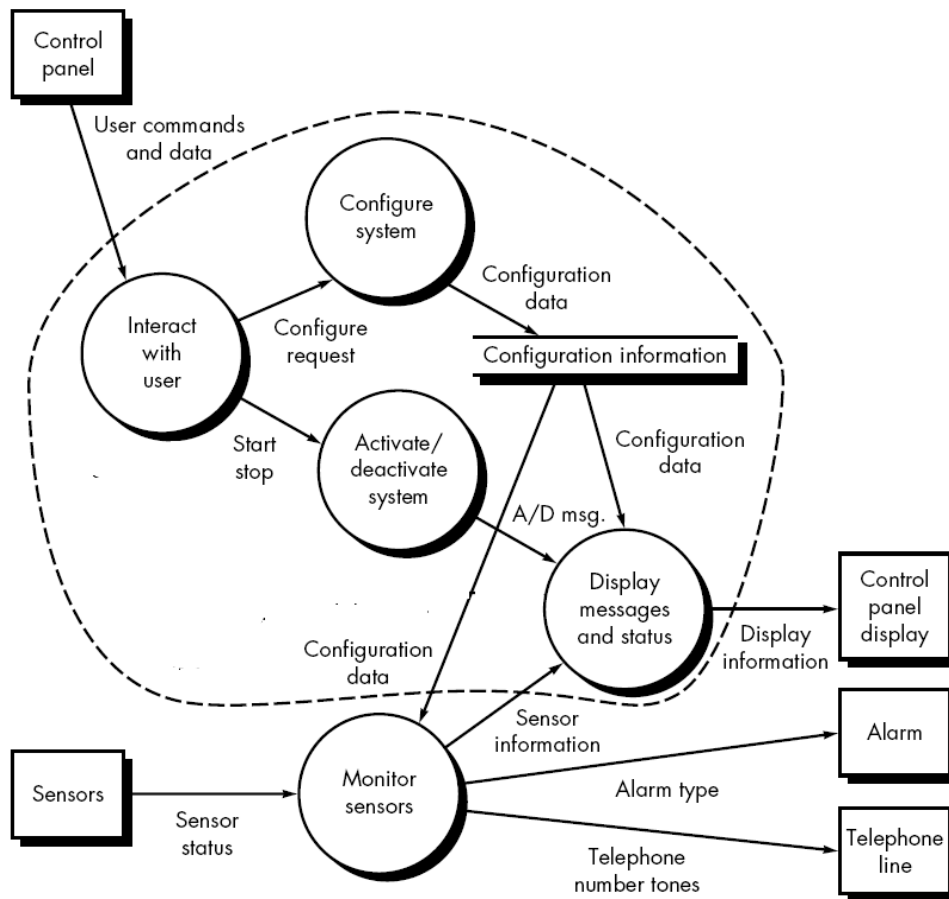
    a. Now draw a level 1 diagram using the following scenario.
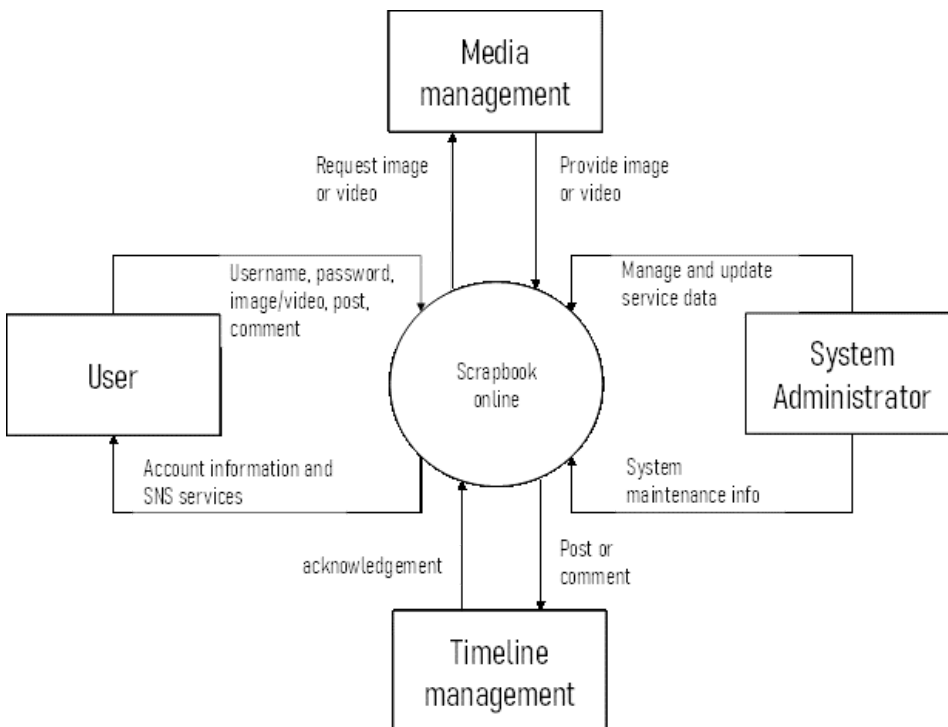
        Control panel send user command and data to Interact User process. This process sends a configure request to configure management process and start/stop signal to Activate/Deactivate system process. Configuration information datastore receives configuration data and sends it to the Display messages and status process. Display messages and status process also receive A/D messages and send display information to control panel display. On the other hand Monitor sensor process receives sensor status from sensor and configuration data from Configuration information datastore. It also sends alarm type information to Alarm, sensor information to display messages and status and telephone number tones to telephone lines.

    b. Now design a level 2 diagram for the Monitor sensor process based on the following scenario.

        Read sensor subprocess receive sensor status and select sensor ID, type to setup assessment process. This process also receives configuration data and generates alarm type and telephone number tones. Finally it sends sensor ID, type, location to Format for display process which ultimately creates sensor information.

        Solution:

Control panel → User commands and data →

Configure system → Configuration data →

Interact with user → Configure request → Configuration information

Interact with user → Start stop → Activate/deactivate system

Activate/deactivate system → A/D msg. → Display messages and status

Configuration information → Configuration data → Display messages and status

Configuration information → Configuration data → Monitor sensors

Display messages and status → Display information → **Control panel display**

Monitor sensors → Sensor information → Display messages and status

Monitor sensors → Sensor information → **Alarm**

Monitor sensors → Alarm type → **Alarm**

Monitor sensors → Telephone number tones → **Telephone line**

Sensors → Sensor status → Monitor sensors

Format for display → Sensor information

Configuration information → Configuration data → Assess against setup

Format for display ← Sensor ID type, location ← Assess against setup

Assess against setup → Alarm type

Assess against setup → Telephone number tones

Read sensors → Sensor ID, type → Assess against setup

Sensor status → Read sensors

3. Suppose Scrapbook is a new social networking site. From the initial requirement a context diagram is drawn above. Now you need to design a level 1 diagram based on following information.

a. User provides a username and password to the system. login/registration process receives it and sends it to the user info datastore for checking purposes. The datastore returns account information and finally users can see their account information. Now user can upload any image or video to their account. Requested data sent to media management. Media management then provides image or video to the media processing process. User can also post or add comment which are handled by the post/comment management process. This process for the post/comment to timeline management and it stores it in post/comment datastore. On the other hand, the system maintenance process retrieves updated system data and sends it to system administrator. System administrator then sends updated service data to manage the service data process and it sends SNS service to the user.