

METHOD OF PROVIDING FIREFIGHTING FACILITY MANAGEMENT SERVICE
IN BUILDING AND COMPUTER PROGRAM FOR PERFORMING THE METHOD

BACKGROUND

5 **1. FIELD**

[0001] The technical idea of the present disclosure relates to a method of providing a firefighting facility management service in a building and a computer program for performing the same.

10 **2. DESCRIPTION OF RELATED ART**

[0002] The importance of fire safety management to prevent fires that cause enormous damage to life and property is increasing day by day. In particular, as the centralization of population and facilities accelerates in recent years,
15 various types of buildings are also becoming denser. When a fire breaks out in such buildings, the fire may affect adjacent buildings and cause enormous damage. Therefore, firefighting facilities need to be installed and operated in the buildings, and management of these firefighting facilities or fire
20 inspection activities for preventing other fire hazards is essential.

[0003] Conventionally, a fire safety manager or fire inspector records and manages installation statuses, inspection schedules, inspection results, etc., of firefighting
25 facilities existing in a building in the form of handwriting

or excel sheet, and manually checks the firefighting facilities.
As a result, there are various problems in that a system for
inspecting or managing a firefighting facility is unclear and
work efficiency is low, resulting in waste of fire safety
5 management manpower, and a person in charge may not easily check
details such as legal inspection periods or defective matters
of a building, resulting in deterioration in management
efficiency.

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SUMMARY

[0004] The present invention is to provide a method of
providing service capable of conveniently managing and checking
an installation status, an inspection schedule, an inspection
result, etc., of a firefighting facility in a building.

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[0005] In an aspect of the present invention, a method of
providing a firefighting facility management service in a
building includes: providing a first interface for acquiring
information on a management target building; acquiring the
information on the management target building through a
20 provided first interface; generating and providing a second
interface for inputting information on firefighting facilities
for each floor based on floor number information of the building
among the acquired information on the building; acquiring the
information on the firefighting facilities installed for each
25 floor of the building through the provided second interface;

and providing firefighting facility installation status information based on the acquired information on the firefighting facility, in which the second interface includes a firefighting facility list including at least one
5 firefighting facility, and a selection item for selecting whether at least one firefighting facility is installed for each floor of the building included in the floor number information.

[0006] The firefighting facility list may include at least one firefighting facility selected by a manager of a terminal among
10 a plurality of firefighting facilities included in an interface provided through the terminal.

[0007] The generating and providing of the second interface may include: determining at least one firefighting facility that is essentially installed in the building according to
15 firefighting laws and regulations based on at least one of a use, a total floor area, the number of floors, a use approval date, and the number of households among the acquired information on the building; and generating and providing the second interface having the firefighting facility list
20 including the at least one firefighting facility determined.

[0008] The information on the firefighting facilities installed for each floor of the building may include whether or not the firefighting facility is installed for each floor and detailed information of the installed firefighting
25 facilities, and the detailed information may include at least

one of management number, type, standard, installation floor, installation location, and inspection item of the firefighting facility.

[0009] The providing of the firefighting facility installation status information may include providing the firefighting facility installation status information through a firefighting facility installation status check interface indicating whether the firefighting facilities are installed for each floor and the number of installed firefighting facilities, and the firefighting facility installation status check interface may differently display the installation status information on each of the firefighting facilities according to whether the firefighting facility is installed, whether detailed information of the installed firefighting facility is acquired, and whether the firefighting facility is a facility that is essentially installed according to the firefighting laws and regulations.

[0010] The method may further include: providing a management interface providing the information on the firefighting facilities installed in the building, in which the management interface may indicate an installation location of a firefighting facility installed on a predetermined floor on a drawing of a predetermined floor of the building by using a firefighting facility icon.

[0011] The method may further include: managing the

information on the firefighting facilities through the management interface, in which the managing may include: updating a database storing information on a firefighting facility corresponding to the firefighting facility icon based
5 on an input of the location movement of the firefighting facility icon displayed on the management interface; or updating the database to store new installation information of a firefighting facility corresponding to the firefighting facility icon based on an input for moving any one of the
10 firefighting facility icons displayed in an icon box of the management interface to a predetermined location in the drawing.

[0012] The providing of the management interface may further include displaying an indicator indicating whether the
15 firefighting facility corresponding to the firefighting facility icon is inspected and an inspection result on the management interface.

[0013] The providing of the management interface may include recognizing, by a terminal, an identification code of a
20 firefighting facility corresponding to the firefighting facility icon; and displaying the location of the firefighting facility corresponding to the recognized identification code on the management interface.

[0014] The method may further include: recognizing an
25 identification code of a firefighting facility installed in the

building; outputting a checklist including inspection items for the firefighting facility in response to the recognized identification code; and receiving the inspection result of the firefighting facility according to the output checklist, and
5 the printing of the checklist may include: identifying a checklist that matches a type of firefighting facility corresponding to the recognized identification code, among checklists for each type of firefighting facility stored in a server or a terminal; and outputting the identified checklist
10 through the terminal.

[0015] In another aspect of the present invention, there is provided a computer program coupled to a computer which is hardware and stored in a computer-readable recording medium to perform the method of providing a firefighting facility
15 management service according to the embodiments of the present disclosure.

BRIEF DESCRIPTION OF DRAWINGS

[0016] In order to more fully understand the drawings cited
20 herein, a brief description of each drawing is provided.

[0017] FIG. 1 is a diagram schematically illustrating a firefighting facility management system for a building according to an exemplary embodiment of the present disclosure.

[0018] FIG. 2 is a flowchart for describing an operation in
25 which the firefighting facility management system according to

the exemplary embodiment of the present disclosure acquires information on a firefighting facility in a building and manages and provides an installation status of the firefighting facility.

5 **[0019]** FIGS. 3 to 6 are exemplary diagrams of an interface provided from a server in relation to the embodiment of FIG. 2.

[0020] FIG. 7 is an exemplary diagram of a management interface using a building drawing as an example of an interface provided
10 for managing firefighting facilities installed in a building.

[0021] FIGS. 8 and 9 are exemplary diagrams of an interface provided for registering and managing an inspection schedule of a firefighting facility in a building.

[0022] FIG. 10 is an exemplary diagram of an interface provided
15 to check and manage work details of firefighting facility managers of a building.

[0023] FIG. 11 is a block diagram illustrating a schematic control configuration of a server or a terminal included in a system for providing a firefighting facility management service
20 in a building according to an exemplary embodiment of the present disclosure.

DETAILED DESCRIPTION

[0024] Exemplary embodiments according to the technical idea
25 of the present disclosure are provided to more completely

explain the technical idea of the present disclosure to those skilled in the art, and the following embodiments are modified in various forms, and the scope of the technical spirit of the present disclosure is not limited to the following embodiments.

5 Rather, these exemplary embodiments make the present disclosure thorough and complete, and are provided in order to completely transfer the technical idea of the present invention to those skilled in the art.

[0025] It is obvious that although terms such as "first",
10 "second", and the like in the present disclosure are used in order to describe various members, regions, layers, portions, and/or components, these members, parts, regions, layers, portions and/or are not limited by these terms. These terms do not imply any particular order, top or bottom, or superiority
15 or inferiority, and are used only to distinguish one member, region, portion, or component from another member, region, portion, or component. Accordingly, a first member, region, region, or component to be described in detail below may refer to a second member, region, portion, or component without
20 departing from the teachings of the technical idea of the present disclosure. For example, the 'first' component may be named the 'second' component, and vice versa, without departing from the scope of the present disclosure.

[0026] Unless defined otherwise, all terms used herein,
25 including technical terms and scientific terms, have the same

meaning as commonly understood by those of ordinary skill in the art to which the concepts of the present disclosure belong. In addition, commonly used terms as defined in the dictionary should be interpreted as having a meaning consistent with what
5 these terms mean in the context of the related technology, and are not to be interpreted in an overly formal sense unless explicitly defined herein.

[0027] In a case where certain embodiments can be otherwise implemented, the order of specific processes may be performed
10 different from the order in which the processes are described. For example, two processes described in succession may be performed substantially simultaneously, or may be performed in an order opposite to the order described.

[0028] In the accompanying drawings, for example, modification
15 of illustrated shapes may be expected depending on a manufacturing technology and/or a tolerance. Therefore, embodiments of the technical idea of the present invention is not to be interpreted as being limited to specific shapes of regions illustrated in the present disclosure, but should
20 include changes of shapes caused in, for example, a manufacturing process. The same reference numerals are used for the same components in the drawings, and duplicate descriptions thereof will be omitted.

[0029] The term "and/or" as used herein includes each and every
25 combination of one or more of the recited members.

[0030] Hereinafter, embodiments according to the technical idea of the present disclosure will be described in detail with reference to the accompanying drawings.

[0031] FIG. 1 is a diagram schematically illustrating a
5 firefighting facility management system for a building according to an exemplary embodiment of the present disclosure.

[0032] In this specification, a firefighting facility may include various fire extinguishing equipment, alarm equipment, evacuation and rescue equipment, fire extinguishing water
10 equipment, and fire extinguishing activity equipment installed in buildings, etc., in accordance with firefighting laws and regulations. For example, the fire extinguishing equipment may include a fire extinguisher, indoor fire hydrant equipment, sprinkler equipment, fire extinguishing equipment such as water
15 spray, outdoor fire hydrant equipment, etc., and the alarm equipment may include emergency broadcasting equipment, automated fire detection equipment, automated fire alarm equipment, a visual alarm, etc. The evacuation and rescue equipment may include evacuation equipment, lifesaving
20 equipment, guidance light, emergency lighting, portable emergency lighting, etc., and the fire extinguishing water equipment may include water supply fire extinguishing water equipment. In addition, the fire extinguishing activity equipment may include front smoke control equipment, living
25 room smoke control equipment, water pipe connection equipment,

emergency outlet equipment, and wireless communication auxiliary equipment.

[0033] In addition, the firefighting laws and regulations may include various laws, rules, enforcement decrees, standards, notifications/directives, etc., related to fire-fighting, such as fire safety management, installation or operation of firefighting facilities/equipment. In this specification, the firefighting laws and regulations are defined as being divided into fire protection act including the framework act on fire protection, the national public officials act, the enforcement decree of the framework act on fire protection, the enforcement rules of the framework act on fire protection, the fire protection facility construction business act, the enforcement decree of the fire protection facility construction business act, and regulations on the installation of local firefighting agencies, fire safety standards including fire safety standards for fire extinguishing equipment and automatic fire extinguishing devices, a fire safety standard for indoor fire hydrants, a fire safety standard for sprinkler facilities, a fire safety standard for water spray fire extinguishing system, a fire safety standard for foam fire extinguishing equipment, various other fire services act notices/directives, fire safety standard manuals, etc., but may be modified in various ways.

[0034] Referring to FIG. 1, the firefighting facility management system of a building according to an embodiment of

the present disclosure includes a server 10, and terminals 20a and 20b (hereinafter, described as "20") accessing the server 10 through a network 30, but is not limited thereto, and the configuration included in the system may be variously modified.

5 **[0035]** The server 10 corresponds to a device that overall controls various operations/functions related to the firefighting facility management service of a building provided through a firefighting facility management system. The server 10 may process a request received from the terminal 20 accessed
10 through the network 30, and generate and transmit a response according to the processing results to provide a user of the terminal 20 with various services related to the management of the firefighting facility.

15 **[0036]** The terminal 20 may include various fixed/mobile terminals such as a desktop PC, a laptop computer, a tablet PC, and a smart phone. The terminal 20 may access the server 10 through a web browser or a separate service application and provide a firefighting facility management service of a building according to an embodiment of the present disclosure
20 to a user. The user of the terminal 20 may correspond to an expert or a manager in charge of managing firefighting facilities in a building, a fire safety manager of a building, a building owner, etc., but is not limited thereto.

25 **[0037]** Hereinafter, various firefighting facility management services provided through the firefighting facility management

system 10 will be described with reference to FIGS. 2 to 10.
In the following specification, it will be described that a
screen or an interface output through the terminal 20 is
generated and provided by the server 10. That is, the terminal
5 20 accesses the server 10 through a web browser or an application,
receives data corresponding to the screen or interface
generated by the server 10, and outputs the received data
through a display or the like.

[0038] In addition, in the following specification,
10 embodiments in which the system provides management services
for the firefighting facilities in a building are described,
but similar to the following embodiments, the system may provide
management services for various facilities such as electricity
and machinery of a building in addition to the firefighting
15 facilities.

[0039] FIG. 2 is a flowchart for describing an operation in
which the firefighting facility management system according to
the exemplary embodiment of the present disclosure acquires
information on a firefighting facility in a building and manages
20 and provides an installation status of the firefighting
facility. FIGS. 3 to 6 are exemplary diagrams of an interface
provided from a server in relation to the embodiment of FIG.
2.

[0040] Referring to FIG. 2, the system may provide an interface
25 for inputting information on management target building (S200),

and acquire the building information through the provided interface (S210).

[0041] Referring to FIG. 3 together, the manager (a fire safety manager of a building or an inspector of a fire inspection company, etc.) of the terminal may perform a selection input of a building information registration menu 301 (e.g., "building addition" icon) included in a screen 300 (e.g., initial screen) output to the terminal in order to register information on a management target building on the firefighting facility management service. The terminal may transmit the building information registration request corresponding to the selection input to the server 10, and the server 10 may provide a building information input interface 310 through the terminal 20 in response to the request.

[0042] The building information input interface 310 may include items for allowing a manager to input various types of information on a building to be registered in the service. For example, the items may include a building name, a purpose, an address, a total floor area, a use approval date, the number of households, the number of floors, a safety management level, and the like. The building information input interface 310 may be displayed in a form partially included in the screen 300 or may be displayed on a separate screen.

[0043] When the information on the building is input through the building information input interface 310, the terminal 20

may transmit the input information to the server 10. The server 10 may register the building as a building managed through the service by storing the information received from the terminal 20 in a memory or a database. According to the embodiment, the information on the building may further include additional information such as building ledger and drawing for each floor.

[0044] The system may generate and provide an interface for inputting the information on the firefighting facilities for each floor of the building based on the floor number information of the building among the building information (S220).

[0045] Referring to FIG. 4 together, when the building information received from the terminal 20 includes the floor number information, the server 10 may generate and provide a firefighting facility input interface 400 for each floor based on the floor number information.

[0046] For example, the firefighting facility input interface 400 for each floor may include a firefighting facility list 410 including at least one firefighting facility, and a firefighting facility installation floor selection item 420 for selecting whether to install firefighting facilities for each floor of the building.

[0047] The firefighting facility list 410 corresponds to a list including a plurality of firefighting facilities installed in a building. The firefighting facilities included in the firefighting facility list 410 may correspond to the

firefighting facilities selected by the manager of the terminal
20 when the building information is input. Alternatively, the
server 10 may extract the firefighting facilities that are to
be essentially installed in the building according to the
5 firefighting laws and regulations based on the purpose, the
total floor area, the number of floors, the use approval date,
the number of households, etc., among the building information,
and provide a firefighting facility list 410 including the
extracted firefighting facilities.

10 **[0048]** Installation floors included in the firefighting
facility installation floor selection item 420 may be
automatically input and generated by the server 10 based on the
floor number information among the building information. For
example, when the information on the number of floors
15 corresponds to "2 floors below ground" and "5 floors above
ground", the server 10 may generate and provide the firefighting
facility installation floor selection item 420 including BF2,
BF1, and the first to fifth floors.

[0049] The system may acquire the information on the
20 firefighting facility installed in the building through an
interface for inputting the information on the firefighting
facilities for each floor (S230), and provide an installation
status of a firefighting facility based on the acquired
information on the firefighting facility (S240).

25 **[0050]** Referring continuously to FIG. 4, the manager of the

terminal 20 may input information on firefighting facilities installed in the building for each floor through the firefighting facility input interface 400 for each floor provided from the server 10. For example, the firefighting facility input interface 400 for each floor may include a check box to select whether to install the firefighting facilities for each floor and each firefighting facility type of a building, but is not limited thereto.

[0051] Although not illustrated, the manager of the terminal 20 may select whether to install the firefighting facilities for each floor through the firefighting facility input interface 400 for each floor and then input detailed information on each of the installed firefighting facilities. The input detailed information may be transmitted to and registered in the server 10. For example, the detailed information may include a management number, a type of firefighting facility, a device name, a standard, an installation floor, an installation location, a management department, and the like.

[0052] Referring to FIG. 5, the server 10 may provide a firefighting facility installation status check interface 500 based on the information on the firefighting facility registered for the building.

[0053] The firefighting facility installation status check interface 500 may provide the information on the installation status of the firefighting facilities for each firefighting

facility and each floor according to a firefighting facility list 510 and an installation floor list 520. The firefighting facility list 510 may be substantially the same as the firefighting facility list 410 of FIG. 4, and the installation floor list 520 may be generated based on the information on the number of floors described above.

[0054] The server 10 may generate and provide the information on the installation status of the firefighting facilities for each firefighting facility and each floor based on the information on the firefighting facility (whether to install the firefighting facilities for each floor, and detailed information on each installed firefighting facility) acquired in steps S220 to S230. For example, the information on the installation status of the firefighting facilities for each floor may indicate information such as whether each firefighting facility included in the firefighting facility list 510 is installed for each floor and the number of installed units.

[0055] According to an embodiment, when providing the information on the installation status of the firefighting facilities for each floor, the server 10 registers that the firefighting facilities are installed on a predetermined floor, but provides a first case in which the detailed information of the firefighting facility is not registered and a second case in which the firefighting facility is not installed on the

predetermined floor in different forms, thereby inducing a manager to register the detailed information on the firefighting facility. For example, the first case may be expressed as "0" on the corresponding field, and the second case
5 may be expressed as a blank.

[0056] According to the embodiment, when fire protection facilities registered as not installed or firefighting facilities registered as installed but for which detailed information is not registered is firefighting facilities that
10 need to be essentially installed according to the firefighting laws and regulations, based on the acquired information on the firefighting facility and the firefighting laws and regulations, the server 10 may display a registration induction indicator for inducing the installation of the firefighting facility or
15 the registration of detailed information in a corresponding field. For example, in the embodiment of FIG. 5, the fire extinguisher needs to be installed on B2F, but detailed information may not be registered. In this case, the server 10 may display the registration inducement indicator in a field
20 corresponding to the fire extinguisher and B2F. Although FIG. 5 illustrates the embodiment in which the registration inducing indicator is displayed in the form of an underbar, the registration inducing indicator may be displayed in various forms (field color, text color change, etc.). The manager may
25 additionally input the detailed information of the

corresponding firefighting facility based on the displayed registration induction indicator.

[0057] Meanwhile, referring to FIG. 6, the server 10 may output a detailed information screen 600 including detailed information of firefighting facilities corresponding to the selected field in response to a selection input of a predetermined field of a firefighting facility installation status check interface 500 for each floor. For example, the detailed information screen may include a management number, a type, a device name, a standard, an installation floor, an installation location, a management department, status information (normal/bad/maintenance required, etc.), and an identification code (QR code, etc.) of each firefighting facility corresponding to the corresponding field.

[0058] The identification code may be attached to the corresponding firefighting facility, and the manager (inspector) recognizes (photographs, etc.) the identification code attached to the firefighting facility through the terminal when inspecting the firefighting facility to receive and check a checklist including inspection items from the server 10, thereby conveniently performing the inspection on various firefighting facilities.

[0059] Specifically, the server 10 may generate unique identification codes for each of the registered firefighting facilities. For example, the identification code may include

a QR code, a barcode, and the like. The manager may print the generated identification code and attach the identification code to the firefighting facility or a location adjacent to the firefighting facility. According to the embodiment, the
5 manager may install an NFC tag or the like instead of the identification code at the firefighting facility or a location adjacent to the firefighting facility.

[0060] Thereafter, the manager may utilize the identification code (or NFC tag) when inspecting, locating, or managing the
10 firefighting facility, or checking other information of the firefighting facility. For example, the manager may recognize the identification code using the terminal 20 when inspecting the firefighting facility. The terminal 20 may acquire and output the checklist including the inspection items for the
15 firefighting facility based on the recognized identification code. The checklist may be generated and stored for each type of firefighting facilities. When registering the firefighting facility, the server 10 may match the checklist corresponding to the type of firefighting facility to the firefighting
20 facility. When the manager performs the inspection on the firefighting facility based on the checklist output to the terminal 20 and inputs the inspection result, the terminal 20 may transmit (or store in the terminal 20) the inspection result to the server 10. That is, the manager may conveniently perform
25 the inspection without having or recognizing a separate

checklist for each type of firefighting facility.

[0061] FIG. 7 is an exemplary diagram of a management interface using a building drawing as an example of an interface provided for managing firefighting facilities installed in a building.

5 **[0062]** Referring to FIG. 7, the server 10 may provide information on firefighting facilities installed in a building through a management interface 700 based on the drawing of the building. The management interface 700 may include drawing information 710 for a predetermined floor of a building and a
10 firefighting facility icon 720 corresponding to firefighting facilities installed on the floor. The firefighting facility icon 720 may be displayed on the drawing to correspond to the installation location of the corresponding firefighting facility. According to the embodiment, a management number of
15 a corresponding firefighting facility may also be displayed on one side of the firefighting facility icon 720.

[0063] The system enables the addition/change/removal of firefighting facilities via the management interface 700. For example, when the terminal 20 receives a selection input of any
20 one of icons displayed in an icon box 730 and a movement input to a predetermined location in the drawing, the terminal 20 may transmit a new installation information of firefighting facilities corresponding to the received input to the server
10. Alternatively, when the terminal 20 receives a selection
25 input of any one of the firefighting facility icons 720

displayed in the drawing and a movement input to another location in the drawing, the terminal 20 may transmit the location movement information of the firefighting facility corresponding to the received input to the server 10.

5 Alternatively, when the terminal 20 receives a selection input and a deletion input of any one of the firefighting facility icons 720 displayed in the drawing, the terminal 20 may transmit the removal information of the firefighting facility corresponding to the received input to the server 10. The
10 server 10 may update a database storing information on the firefighting facilities installed in a building based on the new installation information, the location movement information, and/or the removal information.

[0064] According to the embodiment, the management interface
15 700 may display whether the installed firefighting facilities are inspected and the inspection results. For example, the server 10 may display an inspection incomplete indicator 741 on the corresponding firefighting facility icon 720 for firefighting facilities that are scheduled for inspection but
20 not yet performed, and may display an inspection complete indicator 742 on the corresponding firefighting facility icon 720 for the firefighting facility that has been inspected. In FIG. 7, the inspection incomplete indicator 741 and the inspection complete indicator 742 are displayed in the form of
25 figures, but the indicators 741 and 742 may be provided in

various forms such as colors, symbols, and letters according to the embodiment. In addition, the server 10 may display inspection result indicators 751 and 752 indicating the inspection results of the firefighting facilities that have
5 been inspected on the corresponding firefighting facility icon 720.

[0065] According to the embodiment, the management interface 700 may display the location information of the corresponding firefighting facility on the drawing when the manager
10 recognizes an identification code of a specific firefighting facility using the terminal 20. Based on the displayed location information, the manager may check whether the location of the firefighting facility is correct or check the current location of the manager in the building.

[0066] Accordingly, through the management interface 700
15 generated from the server 10 and provided to the terminal 20, the manager may effectively identify the installation status or inspection status of the firefighting facilities for each floor, and may easily perform the addition/change/removal of
20 the firefighting facilities.

[0067] FIGS. 8 and 9 are exemplary diagrams of an interface provided for registering and managing an inspection schedule of a firefighting facility in a building.

[0068] As described above with reference to FIG. 7, the manager
25 needs to inspect the firefighting facilities installed in the

building periodically or at a predetermined time. In this regard, referring to FIGS. 8 and 9, the system may provide interfaces for registering and managing inspection schedules of firefighting facilities.

5 **[0069]** The server 10 may provide an inspection schedule registration interface 800 for registering the inspection schedules for the firefighting facilities through the terminal 20. For example, the inspection schedule registration interface 800 may include items such as selection items,
10 installation floors (installation locations), and inspection period of the firefighting facilities to be inspected. In particular, since most firefighting facilities need to be checked periodically, the inspection schedule registration interface 800 may provide a batch input function for
15 conveniently registering inspection schedules of inspections periodically performed. For example, the inspection schedule registration interface 800 may include items such as an application period for which a plurality of inspection schedules are input in a batch, an application cycle, and a
20 standard inspection schedule (inspection parking, inspection day, inspection period, etc.). When the information for the batch input of the inspection schedule is acquired through the above items, the server 10 may provide the inspection schedule management interface 810 based on the acquired information.
25 **[0070]** The inspection schedule management interface 810 may

include an inspection schedule list generated based on the application period, the application period, and the standard inspection schedule among the information for the batch input. In addition, the server 10 may calculate an inspection quantity, an inspection completion quantity, an inspection scheduled quantity, and an inspection completion rate for each inspection schedule based on the quantity information of the inspection target firefighting facility selected through the inspection schedule registration interface 800 and provide the calculated inspection quantity, inspection completion quantity, inspection scheduled quantity, and inspection completion rate through the inspection schedule management interface 810.

[0071] The manager may check the inspection schedule of the firefighting facility through the inspection schedule management interface 810 and input the inspection results for each inspection. According to the embodiment, the manager may recognize the identification code of the firefighting facility using the terminal 20 when inspecting the firefighting facility to be inspected. The terminal 20 may output the checklist including the inspection items for the firefighting facility based on the recognized identification code, and the manager performs the inspection on the firefighting facility based on the checklist output to the terminal 20 and input the inspection results. The firefighting facilities for which the inspection result is input to the server 10 may be classified as the

inspection complete.

[0072] Referring to FIG. 9, the server 10 may provide an inspection schedule item 910 registered through the inspection schedule registration interface 800 and the inspection schedule management interface 810 by including the inspection schedule item 910 in a corresponding date in a calendar screen 900. For example, the inspection schedule item 910 may indicate information such as inspection target firefighting facility information, floor information, inspection quantity, inspection completion quantity, and inspection scheduled quantity in text or graphics. According to the embodiment, the server 10 may provide detailed information on the inspection schedule through a pop-up window or a separate screen when selectively inputting or focusing the inspection schedule item 910 through the terminal 20.

[0073] FIG. 10 is an exemplary diagram of an interface provided to check and manage work details of firefighting facility managers of a building.

[0074] Referring to FIG. 10, the system provides a function capable of checking and managing work progress histories, schedules, or the like of a plurality of firefighting facility managers (checkers) through the work log management interface 1000.

[0075] The work log management interface 1000 may be displayed in the form of a calendar screen, and a specific date area 1001

in the calendar may include identification information of an inspector whose work schedule, such as inspection of firefighting facilities, is registered on the corresponding date. According to the embodiment, the identification information of the inspector may be displayed in a text color,
5 etc., according to the work status (complete/incomplete, etc.) of the corresponding inspector.

[0076] When receiving a selection input for a specific date area 1001 through the terminal 20, the server 10 may provide
10 a work log list 1010 registered on the selected date. The work log list 1010 may be displayed on the work log management interface 1000, but may also be displayed as a separate screen according to an embodiment. The representative, senior manager, or the like of the fire inspection company can
15 conveniently check work schedules such as checks of inspectors, whether work is completed, special matters, etc., through the work log list 1010. According to the embodiment, the server 10 may provide all works (e.g., input, change, delete, etc., of inspection results, etc.) input or performed by the
20 inspectors through the system at the selected date by including the all works in the work log list 1010. Accordingly, the representative, senior manager, or the like may conveniently check and manage the work status or work history of the inspectors through the work log list 1010.

25 **[0077]** FIG. 11 is a block diagram illustrating a schematic

control configuration of a server or a terminal included in a firefighting facility management system of a building according to an exemplary embodiment of the present disclosure.

[0078] A device 1100 (server 10 or terminals 20a and 20b) included in the firefighting facility management system according to the embodiment of the present disclosure includes a communication unit 1110, an input unit 1120, an output unit 1130, and a control unit 1140, and a memory 1150. The control configuration illustrated in FIG. 11 is an example for convenience of description, and the device 1100 may include more or less configurations than those illustrated in FIG. 11.

[0079] The communication unit 1110 may include one or more communication modules enabling communication with other terminals, servers, or the like by connecting the device 1100 to a network. For example, the communication module may include a mobile communication module such as LTE and 5G, a wireless communication module such as Wi-Fi, and/or other various wired or wireless communication modules.

[0080] The input unit 1120 is a component for acquiring information such as user input, an image, and audio, and may include various input means such as various mechanical/electronic input means, a camera, and a microphone. The output unit 1130 is for providing information to a user or the like by generating an output related to sight, hearing, or touch, and may include a display, a speaker, a vibration module,

and the like.

[0081] The control unit 1140 may control the overall operation of the device 1100. The control unit 1140 may provide predetermined information or functions by processing signals,
5 data, information, etc., input or output through the above-described components, or by driving various applications stored in the memory 1150.

[0082] For example, the control unit 1140 may control processes for at least some of the operations (registration and provision
10 of installation status of firefighting facilities, management of inspection schedules, etc.) related to the firefighting facility management method according to an embodiment of the present disclosure.

[0083] The control unit 1140 may include at least one processor,
15 and the processor may be implemented as hardware such as a CPU, an application processor (AP), an MCU, an integrated circuit, an ASIC, or an FPGA.

[0084] The memory 1150 may store various programs and data required for an operation of the device 1100. Also, the memory
20 1150 may store data generated or acquired through the control unit 1140. The memory 1150 may be configured as storage media such as ROM, RAM, a flash memory, SSD, HDD, or a combination of the storage media.

[0085] According to the technical idea of the present
25 disclosure, by making it possible to manage installation

statuses, inspection schedules, inspection results, etc., of firefighting facilities installed in a building through computerized services, it is possible to allow a manager to most efficiently manage the firefighting facilities.

5 **[0086]** In addition, the service according to the embodiment of the present disclosure may provide various interfaces that allow a manager to effectively check installation statuses or inspection statuses of facilities for each floor and easily add/change/remove facilities.

10 **[0087]** In addition, a manager may conveniently check information on facilities through a simple operation of recognizing identification codes of the facilities using a terminal, and may perform efficient inspection tasks by receiving a checklist including inspection items of the
15 facilities.

[0088] Effects which can be achieved by a method of providing a firefighting facility management service in a building according to the technical idea of the present disclosure are not limited to the above-described effects. That is, other
20 objects that are not described may be obviously understood by those skilled in the art to which the present invention pertains from the following description.

[0089] Since the description of the above embodiments is only examples with reference to the drawings for a more thorough
25 understanding of the present disclosure, it should not be

construed as limiting the technical idea of the present disclosure.

[0090] In addition, it will be apparent to those skilled in the art that various changes and modifications are possible
5 within a range that does not deviate from the basic principles of the present disclosure.

What Is Claimed Is:

1. A method of providing a firefighting facility management service in a building, the method comprising:

providing a first interface for acquiring information on
5 a management target building;

acquiring the information on the management target building through a provided first interface;

generating and providing a second interface for inputting information on firefighting facilities for each floor based on
10 floor number information of the building among the acquired information on the building;

acquiring the information on the firefighting facilities installed for each floor of the building through the provided second interface; and

15 providing firefighting facility installation status information based on the acquired information on the firefighting facility,

wherein the second interface includes a firefighting facility list including at least one firefighting facility, and
20 a selection item for selecting whether at least one firefighting facility is installed for each floor of the building included in the floor number information.

2. The method of claim 1, wherein the firefighting
25 facility list includes at least one firefighting facility

selected by a manager of a terminal among a plurality of firefighting facilities included in an interface provided through the terminal.

5 3. The method of claim 1, wherein the generating and providing of the second interface includes:

 determining at least one firefighting facility that is essentially installed in the building according to firefighting laws and regulations based on at least one of a purpose, a total
10 floor area, the number of floors, a use approval date, and the number of households among the acquired information on the building; and

 generating and providing the second interface having the firefighting facility list including the at least one
15 firefighting facility determined.

 4. The method of claim 1, wherein the information on the firefighting facilities installed for each floor of the building includes whether or not the firefighting facility is
20 installed for each floor and detailed information of the installed firefighting facilities, and

 the detailed information includes at least one of management number, type, standard, installation floor, installation location, and inspection item of the firefighting
25 facility.

5. The method of claim 4, wherein the providing of the firefighting facility installation status information includes providing the firefighting facility installation status information through a firefighting facility installation status check interface indicating whether the firefighting facilities are installed for each floor and the number of installed firefighting facilities, and

the firefighting facility installation status check interface differently displays the installation status information on each of the firefighting facilities according to whether the firefighting facility is installed, whether detailed information of the installed firefighting facility is acquired, and whether the firefighting facility is a facility that is essentially installed according to the firefighting laws and regulations.

6. The method of claim 1, further comprising:
providing a management interface providing the information on the firefighting facilities installed in the building,

wherein the management interface indicates an installation location of a firefighting facility installed on a predetermined floor on a drawing of a predetermined floor of the building by using a firefighting facility icon.

7. The method of claim 6, further comprising:
managing the information on the firefighting facilities
through the management interface,

5 wherein the managing includes:

updating a database storing information on a firefighting
facility corresponding to the firefighting facility icon based
on an input of the location movement of the firefighting
facility icon displayed on the management interface; or

10 updating the database to store new installation
information of a firefighting facility corresponding to the
firefighting facility icon based on an input for moving any one
of the firefighting facility icons displayed in an icon box of
the management interface to a predetermined location in the
15 drawing.

8. The method of claim 6, wherein the providing of the
management interface further includes displaying an indicator
indicating whether the firefighting facility corresponding to
20 the firefighting facility icon is inspected and an inspection
result on the management interface.

9. The method of claim 8, wherein the providing of the
management interface includes:

25 recognizing, by a terminal, an identification code of a

firefighting facility corresponding to the firefighting facility icon; and

displaying the location of the firefighting facility corresponding to the recognized identification code on the management interface.

10. The method of claim 1, further comprising:

recognizing an identification code of a firefighting facility installed in the building;

10 outputting a checklist including inspection items for the firefighting facility in response to the recognized identification code; and

receiving the inspection result of the firefighting facility according to the output checklist,

15 wherein the outputting of the printing of the checklist includes:

identifying a checklist that matches a type of firefighting facility corresponding to the recognized identification code, among checklists for each type of firefighting facility stored in a server or a terminal; and

20 outputting the identified checklist through the terminal.

11. A computer program coupled to a computer which is hardware and stored in a computer-readable recording medium to perform

the method of claim 1.