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FOOD INVENTORY MANAGEMENT SYSTEM AND METHOD

Abstract

The present disclosure provides systems and methods for a food inventory management system including a food inventory management application. The application is configured to receive a plurality of food details associated with a food item that is or will be stored in a food storage cabinet. The food details are used to create digital food record and a scannable code associated with the food item. The food item is then added to a digital food inventory accessible and manageable via the application. The application is also configured to recommend recipes for the food items included in the digital food inventory and monitor expiration dates associated with the food items in the digital food inventory to reduce, if not eliminate, the incidence of wasted food items. The application is also configured to connect multiple users of the application to promote exchange and donation of food items.

Inventors: Burt; Steven Ryan (Castle Rock, CO)

Applicant: MEATSAFE LLC (Castle Rock, CO)

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Background/Summary

CROSS-REFERENCE TO RELATED APPLICATION [0001] This application claims priority to and the benefit of the filing date of U.S. Provisional Application No. 63/555,360, filed Feb. 19, 2024, the entire disclosure of which is hereby incorporated herein by reference.

FIELD OF THE DISCLOSURE

[0002] This disclosure relates in general to food inventory management systems and methods, and specifically, to a food inventory management system that includes a mobile application that tracks food inventory stored in a freezer.

BACKGROUND

[0003] Each year, an estimated one hundred billion pounds of food is wasted in the United States alone, which equates to over four hundred billion United States dollars in food waste. This food waste occurs at every stage of food production and distribution, including at the stages where the food is farmed, packed, shipped, manufactured, sold, and stored and consumed in homes. According to some statistics, nearly half of all food waste occurs in the home. Some of the main factors contributing to food waste in the home include outdated storage solutions, lack of organization within and associated with those storage solutions, and a disconnect between food need and resources available.

[0004] The present disclosure provides food inventory management systems and methods that provide improved organization and storage solutions and facilitate a reduction in food waste.

Description

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] FIG. **1** illustrates a food inventory management system including a food storage cabinet and a food inventory management program, according to one or more embodiments of the present disclosure;

[0006] FIG. **2** illustrates a data flow associated with the food inventory management system of FIG. **1**, according to one or more embodiments of the present disclosure;

[0007] FIG. **3**A illustrates a scannable code generated using the food inventory management system of FIG. **1** being scanned using the food inventory management program, according to one or more embodiments of the present disclosure;

[0008] FIG. **3**B illustrates a second embodiment of the scannable code of FIG. **3**A, according to one or more embodiments of the present disclosure;

[0009] FIG. **4** illustrates a home screen associated with the food inventory management program of FIG. **1**, according to one or more embodiments of the present disclosure;

[0010] FIG. **5** illustrates a digital food inventory including one or more food items associated with the food inventory management program of FIG. **1**, according to one or more embodiments of the present disclosure;

[0011] FIG. **6**A illustrates a recipe catalog associated with the food inventory management program of FIG. **1**, the recipe catalog including one or more recipes associated with the one or more food items of the digital food inventory, according to one or more embodiments of the present disclosure;

[0012] FIG. **6**B illustrates a recipe of the recipe catalog of FIG. **6**A, according to one or more embodiments of the present disclosure;

- [0013] FIG. **7**A illustrates a notification associated with the food inventory management program of FIG. **1**, the notification including a meal idea, according to one or more embodiments of the present disclosure;
- [0014] FIG. 7B illustrates another notification associated with the food inventory management program of FIG. 1, the another notification including an expiration warning, according to one or more embodiments of the present disclosure;
- [0015] FIG. **8** illustrates a map including a provision connection network, according to one or more embodiments of the present disclosure;
- [0016] FIG. **9** illustrates a method of operating the food inventory management system of FIG. **1**, according to one or more embodiments of the present disclosure; and
- [0017] FIG. **10** illustrates a node for implementing one or more example embodiments of the present disclosure, according to one or more embodiments of the present disclosure.

DETAILED DESCRIPTION

[0018] The systems and methods disclosed herein provide improvements to the systems and methods used for food inventory management. It is to be understood that that the present disclosure provides many different embodiments, or examples, for implementing different features of various embodiments. Specific examples of components and arrangements are described below to simplify the present disclosure. These are, of course, merely examples and are not intended to be limiting. [0019] FIG. 1 illustrates a food inventory management system 100, according to one or more embodiments. In one or more embodiments, the food inventory management system 100 includes a food storage cabinet 105, a mobile application, such as, for example, a food inventory management application 110, a user device 115, and a computer 120. In one or more embodiments, the food inventory management system 100 may further include a scale 125 and a printer 130. In one or more embodiments, the food storage cabinet 105, the scale 125, and/or the printer 130 are one unit. In one or more embodiments, the food storage cabinet 105, the food inventory management application 110, the computer 120, the scale 125 and the printer 130 may all be in communication with each other via a network 135.

[0020] In one or more embodiments, the network **135** may include the Internet, one or more local area networks, one or more wide area networks, one or more cellular networks, one or more wireless networks, one or more voice networks, one or more data networks, one or more communication systems, and/or any combination thereof. In some embodiments, the network may also include Wi-Fi®, Bluetooth®, and Long-Term Evolution ("LTE") or other wireless broadband communication technology.

[0021] In one or more embodiments, the computer **120** includes a computer processor **140** and a computer readable medium **145** operably coupled thereto. Instructions accessible to, and executable by, the computer processor **140** are stored on the computer readable medium **145**. A database **150** is also stored in the computer readable medium 145. In one or more embodiments, the database 150 may store data associated with, for example, user information **150**A, freezer details **150**B, a digital record **150**C including a plurality of food details **150**D, a digital food inventory **150**E including a plurality of food items **150**F, a recipe catalog **150**G including a plurality of recipes **150**H, consumption data **1501**, expiration information **150**J, and certification parameters **150**K. In one or more embodiments, the computer 120 further includes a graphical user interface ("GUI") 155 including an input device **160** and an output device **165**. In one or more embodiments, the input device **160** may include a camera, which may be a digital camera configured to capture still photographs and/or video. In one or more embodiments, the input device 160 may include a keyboard, mouse, microphone, or other device coupled to the user device 115 that sends instructions to the user device **115**. In one or more embodiments, a user may provide a plurality of inputs to the computer **120** via the input device **160**. In an example embodiment, the input device **160** and the output device **165** include a graphical display, which, in several example embodiments,

is in the form of, or includes, a touch screen display, one or more digital displays, one or more liquid crystal displays, and/or any combination thereof. In an example embodiment, the output device **165** includes a graphical display, a printer, a plotter, and/or any combination thereof. In an example embodiment, the input device **160** is the output device **165**, and the output device **165** is the input device **160**. In one or more embodiments, the GUI **155** is configured to display a plurality of windows or screens to a user.

[0022] In one or more embodiments, the computer **120** may also include a machine learning model **170** stored thereon, which may be used to evaluate and make predictions based on the data stored in the database **150**.

[0023] In one or more embodiments, the computer **120** may be remote from the user device **115**. In one or more embodiments, the user device **115** may include a computer including one or more components of the computer **120**. In one or more embodiment, the user device **115** may include the computer **120**. In one or more embodiments, the computer **120** may be the user device **115**. [0024] In one or more embodiments, the user device **115** may be, or include, a telephone, a smart phone, a tablet computer, a personal computer, a personal digital assistant, a cellular telephone, other types of telecommunications devices, other types of computing devices, and/or any combination thereof.

[0025] In one or more embodiments, a portion of the food inventory management application 110 is stored in the computer readable medium **145** of the computer **120** of the user device **115**. Another portion may be stored in a cloud storage platform or on a server that is remote from the user device **115**. In some embodiments, the food inventory management application **110** includes and/or executes one or more web-based programs, Intranet-based programs, and/or any combination thereof. In an example embodiment, the food inventory management application 110 includes a computer program including a plurality of instructions, data, and/or any combination thereof. In an example embodiment, the application is written in, for example, Hypertext Markup Language (HTML), Cascading Style Sheets (CSS), JavaScript, Extensible Markup Language (XML), asynchronous JavaScript and XML (Ajax), iOS, XCode, Swift, Android for mobile, and/or any combination thereof. In an example embodiment, the food inventory management application **110** is a web-based application written in, for example, Java or Adobe Flex, which pulls real-time information from the user device 115. In some embodiments, the food inventory management application **110** is or includes a mobile front-end application downloaded on the user device **115**, and a backend application stored or downloaded on another computer **120**, server, or cloud that is remote from the user device **115**. In one or more embodiments, the mobile front-end application communicates with the backend application to display data created and pushed by the backend application. In some embodiments, the food inventory management application **110** accesses the input device **160** or the output device **165** of the GUI **155**.

[0026] In one or more embodiments, the food inventory management system **100** is configured to allow users, such as hunters, homesteaders, food enthusiasts, and other such users, to efficiently store, organize, and track their food items **150**F in a digital food inventory **150**E across multiple food storage cabinets **105** such that the digital food inventory **150**E corresponds to a physical food inventory associated with the food storage cabinet(s) **105**.

[0027] In one or more embodiments, a user of the user device **115** may access the food inventory management application **110** and input user information **150**A via the input device **160** to create a user account associated with that individual user. In one or more embodiments, the user information **150**A may include a name, address, username, password, email address, and other identifying information.

[0028] In one or more embodiments, one or more users may be given permissions or access to a single user account. For example, in one or more embodiments, a first user of a user account associated with the food inventory management application **110** may be the owner or administrator of the user account, which first user may have full access to all features associated with the user

account or the food inventory management application **110** including adding and removing food storage cabinets **105**, managing the digital food inventory **150**E, generating scannable codes to be printed using the printer **130**, accessing compliance records associated with the certification parameters **150**K, as well as any other features discussed with respect to other users. In one or more embodiments, a second user may be another member of a household, which second user may be able to use the food inventory management application **110** to add and remove food items **150**F from the digital food inventory **150**E, generate scannable codes to be printed using the printer **130**, and view recipes **150**H stored in the recipe catalog **150**G, but may not be able to access or modify freezer details **150**B or compliance records. In one or more embodiments, a third user may be a guest user with public link access to the food inventory management application 110, which third user may only be able to remove a food item **150**F from the digital food inventory **150**E by scanning a scannable code associated with the food item **150**F. In one or more embodiments, a fourth user may be a regulatory officer, which fourth user may have read-only permissions to access certification records associated with a food item 150F by scanning a scannable code associated with the food item **150**F. In one or more embodiments, a fifth user may be a food bank partner, which fifth user may only have access to a donation inventory of the digital food inventory **150**E and to compliance records associated with the certification parameters **150**K. In one or more embodiments, the owner or administrator of the user account associated with the food inventory management application 110 may invite, via a sharable link, additional users to access the user account.

[0029] In one or more embodiments, the food storage cabinet **105** associated with the food inventory management application **110** may be a freezer for freezing and storing frozen food items **150**F. In one or more embodiments, the food storage cabinet **105** may have a plurality of shelves, bins, drawers, compartments, or zones for storing the food items **150**F. In one or more embodiments, the food storage cabinet **105** may be configurable to a specific climate, temperature, or range of temperatures. In one or more embodiments, each individual shelf, bin, drawer, compartment, or zone may be individually configurable to a specific climate, temperature, or range of temperatures.

[0030] In one or more embodiments, a digital food storage cabinet associated with the food storage cabinet **105** may be created using and within the food inventory management application **110**. In one or more embodiments, the digital food storage cabinet may be configured with as many shelves, bins, drawers, compartments, or zones as the food storage cabinet **105** and with as same climates, temperatures, or range of temperatures so that the digital food storage cabinet is an accurate representation of the food storage cabinet **105** to facilitate accurate inventorying and management of food items **150**F stored in the food storage cabinet **105**. In one or more embodiments, such freezer details **150**B associated with the food storage cabinet **105** and defining the digital food storage cabinet may be entered and communicated to the food inventory management application **110** via the GUI **155** of the user device **115**. In one or more embodiments, a user may create one or more digital food storage cabinets associated with one or more food storage cabinets **105** within the food inventory management application **110**.

[0031] FIG. **2** illustrates an example data flow **200** associated with operation of the food inventory management system **100**, according to one or more embodiments. In one or more embodiments, a

management system **100**, according to one or more embodiments. In one or more embodiments, a user of the food inventory management application **110** may desire to add a food item **150**F to the food storage cabinet **105** and add the food item **150**F to the digital food inventory **150**E via the food inventory management application **110**. To do so, in one or more embodiments, the user may input a plurality of food details **150**D associated with the food item **150**F using the food inventory management application **110** and using the input device **160** of the GUI **155** of the user device **115**. In one or more embodiments, the food details **150**D associated with the food item **150**F may include a food type, a food cut, a food weight, a food storage date, a food storage location within the food storage cabinet **105** (e.g., top shelf-left bin), a food source, a food processing date, a food

processing method, a food packaging type, an expected shelf life or expiration date, or other related information as desired for a particular application.

[0032] In one or more embodiments, the food inventory management application **110** is in communication with the food storage cabinet **105** and designates, identifies, or assigns the food storage location for the food item **150**F. In one or more embodiments, the designation of the food storage location may be made manually by the user via the food inventory management application **110** and/or via the food storage cabinet **105**. Regardless, in some embodiments, the designation is printed on a food label to facilitate positioning of the food item **150**F is the designated food location within the food storage cabinet **105**.

[0033] In one or more embodiments, the food weight associated with the food item **150**F may be entered manually. In one or more embodiments, the food item **150**F may be placed on the scale **125**, which scale **125** may weigh the food item **150**F and wirelessly transmit or communicate the food weight associated with the food item **150**F to the food inventory management application **110** via the network **135**.

[0034] In one or more embodiments, the plurality of food details **150**D may be used to create or establish the digital record **150**C associated with the food item **150**F. In one or more embodiments, upon creation of the digital record **150**C associated with the food item **150**F, the food item **150**F may then be added to the digital food inventory **150**E.

[0035] In one or more embodiments, using the plurality of food details **150**D associated with the food item **150**F, the food inventory management program **110** may create or generate a scannable code associated with, or including, the plurality of food details **150**D associated with the food item **150**F (as shown in FIGS. **3**A and **3**B). In one or more embodiments, the scannable code may be a quick-response ("QR") code. In one or more embodiments, the scannable code is a 2-D code, but it may also be a linear barcode or combination of both. The scannable code may include a PDF-417 code, a data matrix, an Aztec code, a Maxicode, etc. In one or more embodiments, the food inventory management application **110** and the user device **115** may be configured to wirelessly transmit or communicate the scannable code to the printer **130** for printing via the network **135**. In one or more embodiments, the printer **130** may be a label printer configured to print the scannable code onto a label or sticker. In one or more embodiments, the scannable code, once printed using printer **130**, may be configured to be attached or affixed to the food item **150**F with which it is associated. In one or more embodiments, upon creation of the scannable code associated with the food item **150**F, the scannable code may be scanned to add the food item **150**F to the digital food inventory **150**E. In one or more embodiments, the food item **150**F may then be stored in the food storage cabinet **105** with the scannable code affixed to the food item **150**F. By affixing the scannable code to the food item **150**F, a user of the food inventory management program **110** may simply scan the scannable code using the user device **115** to quickly retrieve or display the food details **150**D associated with the food item **150**F.

[0036] FIG. 3A illustrates a scannable code 300 affixed to a food item 150F, according to one or more embodiments. FIG. 3A also illustrates a scan section 305 associated with the food inventory management application 110 displayed via the GUI 155 of the user device 115, the scan section 305 including a scan feature 310. In one or more embodiments, as shown in FIG. 3A, using the user device 115 and the food inventory management program 110, the scannable code 300 may be scanned using the scan feature 310 to retrieve the food details 150D associated with the food item 150F on which the scannable code 300 is affixed. In one or more embodiments, the scannable code 300 may be scanned directly using a camera associated with the user device 115 without first accessing the food inventory management application 110; however, upon scanning the scannable code 300, the food inventory management application 110 may be automatically opened and accessed, or the user may be directed to a webpage such that downloading of the food inventory management application 110 is not required.

[0037] As shown in FIG. **3**A, in one or more embodiments, the scannable code **300** is placed in

view of the camera and the food inventory management application 110 reads, upon the selection of the selectable scan feature 310, the scannable code 300, which represents the food details 150D associated with the food item 150F. However, in other embodiments, the selection of the scan feature 310 is not necessary and the food inventory management application 110 recognizes the scannable code 300 upon the scannable code 300 being placed in the view of the camera. [0038] In one or more embodiments, the scannable code 300 is printed on a label including information or data in addition to the scannable code 300. In one or more embodiments, the food inventory management application 110 is configured to read such additional data from the label that is separate from the scannable code 300. For example, the food inventory management application 110 may detect a selection (illustrated in FIG. 3A with an "X") of the food type (e.g., elk, Mule deer, Whitetail, Bear, Sheep, Goat, Moose) and the food cut (e.g., backstrap, shoulder, neck, shank, flank, rump). However, as discussed above, this additional data may also be included in the scannable code 300.

[0039] In one or more embodiments, the scannable code **300** may also be scanned in order to remove the food item **150**F from the digital food inventory **150**E. For example, in one or more embodiments, a user may desire to remove and consume the food item **150**F from the food storage cabinet **105**, and to do so may remove the food item **150**F from the food storage cabinet **105**, scan the scannable code **300** using the user device **115** and scan feature **305** of the food inventory management application **110**, and make a selection to remove the food item **150**F from the digital food inventory **150**E.

[0040] FIG. **3**B illustrates another embodiment of the scannable code **300**. In the embodiments shown in FIGS. **3**A and **3**B, the food item **150**F associated with the scannable code **300** is an elk backstrap steak.

[0041] FIG. 4 illustrates a home section 400 associated with the food inventory management application 110. As shown, the home section 400 may display a summary 405 or overview of the digital food inventory 150E. In one or more embodiments, the summary 405 of the digital food inventory 150E includes a total weight of the plurality of food items 105F in the digital food inventory 150E and in the food storage cabinet 105, an estimated total number of meals that may be prepared using the plurality of food items 150F in the digital food inventory 150E and in the food storage cabinet 105, an estimated total amount of protein associated with the plurality of food items 150F in the digital food inventory 150E and in the food storage cabinet 105, or a selectable categorization of the plurality of food items 150F in the digital food inventory 150E and in the food storage cabinet 105. In one or more embodiments, the categories may include, for example, big game, farm, small game, and fish.

[0042] A further illustrated in FIG. **4**, the food inventory management application **110** includes selectable links associated with additional sections of the food inventory management application **110**, including the home section **400**, an inventory section **500**, a meals section **600**, and a store section **410**. In one or more embodiments, the store section **410** may include links to prep supplies, knives, labels, bags, and other related items that may be purchased through the food inventory management application **110**.

[0043] FIG. **5** illustrates an inventory section **500** associated with the food inventory management application **110**. In one or more embodiments, the inventory section **500** displays information associated with the digital food inventory **150**E, including the plurality of food items **150**F, and the digital record **150**C, including the plurality of food details **150**D associated with the plurality of food items **150**F. In one or more embodiments, the information associated with the digital food inventory **150**E and the digital record **150**C may be updated and displayed in real-time such that an accurate representation of the available food items **150**F is displayed to a user. In the embodiment shown, a landing page associated with the inventory section **500** displays a summary **505** of the plurality of food items **150**F. In the embodiment shown, the summary **505** of the plurality of food details **150**D. In the embodiment shown, the summary **505** of the plurality of food items

150F in the digital food inventory **150**E is categorized by food type, such as, for example, the type of animal. In one or more embodiments, a summary associated with each category may also be shown and include a total weight of each food type, a total estimated number of meals that can be prepared with each food type, and totals of each type of food cut associated with each food type. For example, as shown in FIG. **5**, the first category is elk, and the summary associated with elk indicates that there is a total of 65 lbs of elk, which includes 23 steaks and 5 roasts, and which can make an estimated 35 meals. In one or more embodiments, each category displayed on the landing page of the inventory section may be selectable, such that when a category is selected, additional details associated with that category may be displayed.

[0044] In one or more embodiments, the landing page of the inventory section **500** may also include a list of selectable filters **510** that may be selected to show, for example, all food types, big game, small game, farm, fish, or other categories.

[0045] In one or more embodiments, the food inventory management application **110** may also include a search feature that enables a user to search within the digital food inventory **150**E. In one or more embodiments, the search feature may enable a user to search the digital food inventory **150**E using any one or more of the food details **150**D as a search criteria, including food type, food cut, food storage date, food storage location, and expected shelf life or estimated expiration date. [0046] FIG. **6**A illustrates a meal section **600** associated with the food inventory management application **110**. In the embodiment shown, the meal section **600** displays a plurality of recipes **150**H of a recipe catalog **150**G associated with the plurality of food items **150**F of the digital food inventory **150**E. In one or more embodiments, at least one recipe **150**H is generated for each food item **150**F in the digital food inventory **150**E, or for each category (e.g., categorized by food details **150**D, such as food type) of food item **150**F in the digital food inventory **150**E. In one or more embodiments, each of the plurality of recipes **150**H displayed in the meal section **600** is selectable such that, upon selection, additional details, including ingredients and instructions, associated with the selected recipe **150**H are displayed (see FIG. **6**B). In one or more embodiments, the meal section **600** may include a list of selectable filters **605** for filtering the plurality of recipes **150**H displayed in the meal section, which list of selectable filters 605 may include all recipes, favorite recipes, suggested recipes, Traeger recipes, recipes by animal type, or other similar filters. [0047] In one or more embodiments, the plurality of recipes **150**H may be accessed and retrieved via the Internet. In one or more embodiments, the plurality of recipes **150**H may be stored in, and accessed and retrieved from, the database **150**.

[0048] In one or more embodiments, a user may input dietary restrictions or preferences into the food inventory management application **110**. In one or more embodiments, food inventory management application **110** may automatically and dynamically adjust the plurality of recipes **150**H displayed in the meal section **600** based on the provided dietary restrictions or preferences. In one or more embodiments, food inventory management application **110** may automatically and dynamically adjust the plurality of recipes **150**H displayed in the meal section **600** in real-time or near real-time based on an inventory level of the digital food inventory **150**E.

[0049] FIG. **6**B illustrates the meal section **600** after a selection of one of the plurality of recipes **150**H has been received, according to one or more embodiments. As shown, once a selection of one of the plurality of recipes **150**H has been made, additional details, including ingredients and instructions needed to prepare the selected recipe **150**H, are displayed via the GUI **155**. [0050] In one or more embodiments, the food inventory management application **110** is configured to track or monitor consumption patterns and consumption rates associated with a user's consumption of the food items **150**F in the digital food inventory **150**E and the food storage cabinet **105**. In one or more embodiments, consumption data **1501** associated with the tracked consumption patterns and consumption rates is stored in the database **150**. In one or more embodiments, the tracked or monitored consumption patterns and consumption rates may be associated with or categorized by any one or more of the food details **150**D. For example, in one or more

embodiments, the food inventory management application **110** may track or monitor how frequently a user removes a specific food type or food cut from the digital food inventory **150**E and from the food storage cabinet **105** and how much (e.g., weight) of such food type or food cut the user removes at a time. In one or more embodiments, the food inventory management application **110** may be configured to recommend recipes **150**H based on the consumption data **1501**, such as, for example, to recommend favorite recipes or to recommend recipes for food items that are consumed less frequently.

[0051] In one or more embodiments, the food inventory management application **110** is configured to track or monitor expiration information **150**J associated with the plurality of food items **150**F in the digital food inventory **150**E and in the food storage cabinet **105**. In one or more embodiments, expiration information **150**J may be accessed or retrieved from the Internet or provided by a user in the food detail **150**D and stored in the database **150**. In one or more embodiments, the expiration information **150**J may include information related to the length of time a particular food item **150**F can stay in the food storage cabinet **105**, based on the freezer details **150**B (e.g., the climate of the food storage cabinet **105**), before that particular food item **150**F will expire or spoil. In one or more embodiments, such expiration information **150**J may be based on laws, rules, or regulations concerning health and safety standards for food.

[0052] In one or more embodiments, the food inventory management application 110 is configured to generate alerts based on the data stored in the database 150, including the user information 150A, the freezer details 150B, the digital records 150C including the food details 150D, the digital food inventory 150E including the food items 150F, the recipe catalog 150G including the recipes 150H, the consumption data 1501, and the expiration information 150J. In one or more embodiments, the alert may include a meal recommendation or an expiration warning. [0053] In one or more embodiments, the food inventory management application 110 is configured to learn behaviors associated with a user of the food inventory management application 110 to predict future use or consumption of food items 150F in the digital food inventory 150E such that more relevant meal ideas and recipes 150H can be recommended via alerts, and to provide alerts relating to the removal of specific food items 150F from the food storage cabinet 105 before those food items 150F expire or spoil.

[0054] In one or more embodiments, the food inventory management application **110** uses location services associated with the user device **115** and an associated user to determine when and how to push and display alerts to the user via the user device **115**. For example, in one or more embodiments, the food inventory management application **110** may determine that a user associated with the user device **115** leaves his or her home (e.g., where the food storage cabinet **105** is located) on most weekdays at 9 am for 8 hours. Using this determination, the food inventory management application **110** may push or display an alert via the user device **115** at 8:30 am associated with a meal idea or a recommendation to remove a specific food item **150**F from the food storage cabinet **105** to ensure that the food item **150**F is ready to be prepared for a meal that evening.

[0055] In one or more embodiments, the food inventory management application 110 is configured to monitor the digital food inventory 150E and generate an alert when a particular food item 150F in the digital food inventory 150E is within a predetermined period of time of a predicted expiration date associated with that particular food item 150F. In one or more embodiments, based on the food details 150D, the freezer details 150B, the consumption data, and the expiration information 150J, the food inventory management application 110 may determine that certain food items 150F will expire before they are consumed, and thus a usage or expiration alert for such food items 150F can be generated. For example, the food inventory management application 110 is configured to determine and alert a user when, based on the relevant data described above, 35 lbs of food will remain unused at the time of its expiration.

[0056] In some embodiments, the food inventory management application **110** is in communication

with, or integrates, a software with predictive capabilities, such as those described above. In one or more embodiments, the software with predictive capabilities may include artificial intelligence ("AI"), generative AI, machine learning, deep learning, etc. In one or more embodiments, in addition to the predictive capabilities described above, the food inventory management application **110** may be configured to recognize food details **150**D as they are being input via the GUI **155** so that additional related food details **150**D can be auto populated or suggested to make creation of the digital records **150**C more efficient.

[0057] FIG. 7A illustrates a meal idea alert **700**A associated with a meal idea, according to one or more embodiments. In one or more embodiments, the meal idea alert **700**A is associated with a food item **150**F in the digital food inventory **150**E and one or more recipes **150**H that are associated with the food item **150**F. In one or more embodiments, the food inventory management application **110** may push the meal idea alert **700**A to the user device **115** and display the meal idea alert **700**A via the GUI **155**. In one or more embodiments, the meal idea alert **700**A may be selectable such that upon selection of the meal idea alert **700**A, additional details associated with the food item **150**F and the recipe **150**H may be displayed.

[0058] FIG. 7B illustrates a usage alert **700**B associated with a usage warning or an expiration warning, according to one or more embodiments. In one or more embodiments, the usage alert **700**B is associated with a food item **150**F in the digital food inventory **150**E that has been stored in the food storage cabinet **105** for a certain period of time or that may be expiring soon. In one or more embodiments, the food inventory management application **110** may push the usage alert **700**B to the user device 115 and display the usage alert 700B via the GUI 155. In one or more embodiments, the usage alert **700**B may be selectable such that upon selection of the usage alert **700**B, one or more recipes **150**H associated with the food item **150**F may be displayed. [0059] FIG. 8 illustrates a map 800 including a provision connection network 805, according to one or more embodiments. In one or more embodiments, the provision connection network **805** is a platform associated with or included within the food inventory management application **110**. The provision connection network **805** is configured to allow users of the food inventory management application 110 to connect, share, trade, sell, or donate food items 150F in their respective food storage cabinets **105**. In one or more embodiments, the provision connection network **805** may include shelters and food banks looking to receive donations of food items 150F. In one or more embodiments, the provision connection network **805** is configured to identify potential donors and connect the potential donors with potential recipients, including shelters, food banks, and neighbors.

[0060] With continued reference to FIGS. 1, 2, 3A, 3B, 4-5, 6A, 6B, 7A, and 7B, in one or more embodiments, the food inventory management system **100** is also configured to facilitate food certification and compliance tracking. In one or more embodiments, the food inventory management application **110** includes a food certification and compliance portion that enables a user to log food certification and compliance details and enable a user to certify a food item. [0061] In general, the food certification and compliance portion of the food inventory management application **110** is configured to be used by hunters. When a hunter kills an animal, it is desirable to be able to log details associated with how the animal was killed, where the animal was killed, when the animal was killed, the temperature of the environment in which the animal was killed, the temperature of the environment in which the animal was initially stored, the temperature of the environment in which the animal was stored in long-term storage, the amount of time the animal was stored in long-term storage, the number of animals that were killed, and other related details that would be desirable or required for legal and regulatory certification and compliance purposes. [0062] In one or more embodiments, the food certification and compliance portion enables a hunter to log certification details associated with the handling of the animal from the time the animal was killed to the time the animal was stored and distributed. In one or more embodiments, the food details 150D may include the certification details. In one or more embodiments, the certification

details may be logged separately from the food details **150**D, but the digital record **150**C associated with the food item **150**F may also include the certification details. For clarity purposes, food item **150**F will be used to refer to the animal and the meat obtained from the animal when describing the food certification and compliance portion.

[0063] In one or more embodiments, when a food item **150**F (e.g., an animal) is killed out in nature, a user may access the food certification and compliance portion of the food inventory management application **110** to input or log certification details associated with the circumstances surrounding the killing and processing of the food item **150**F. In one or more embodiments, the food inventory management application **110** may allow the user to manually input food certification details including a date the food item **150**F was killed, a time the food item **150**F was killed, a location in which the food item **150**F was killed, a method in which the animal was killed (e.g., bow or rifle), a temperature associated with the natural environment in which the food item **150**F was killed, and a temperature associated with the storage environment in which the food item **150**F was initially stored in the natural environment or during transportation (e.g., field dressing, cooler storage, ice chest). In one or more embodiments, the food certification details associated with the food item **150**F. In one or more embodiments, the food certification details associated with the food item **150**F may be included in the digital food record **150**C associated with the food item **150**F, but may be separate from the food details **150**D.

[0064] In one or more embodiments, the food certification and compliance portion of the food inventory management application 110 may automatically log one or more food compliance details associated with the food item 150F. For example, in one or more embodiments, when a user kills the food item 150F, the user may take a picture of the food item 150F using the camera associated with user device 115, which may be accessed via the food inventory management application 110. When the user takes the picture of the food item 150F, metadata associated with the picture may include one or more food certification details that may be automatically accessed and logged in the food inventory management application 110. In one or more embodiments, the metadata associated with the picture may include a time, a date, a location, and a temperature when the picture was taken. This information may be automatically accessed and retrieved from the picture by the food inventory management application 110 and logged as food certification details associated with the food item 150F. In one or more embodiments, using the machine learning model 170, the food inventory management application 110 may be able to retrieve food details 150D from the picture, including food type, via image recognition.

[0065] In one or more embodiments, exchange image file format (EXIF) standards may be used to store the metadata within the picture, which is a digital picture or image. In one or more embodiments, global positioning system ("GPS") sensors associated with the user device may be accessed or used to automatically record GPS, including latitude and longitude, coordinates associated with the picture, which GPS coordinates may then be embedded within the picture as EXIF data, or metadata. In one or more embodiments, other portions of the user device 115 may be accessed such that the date, time, and temperature associated with the picture may also be embedded within the picture as EXIF data. In one or more embodiments, the food inventory management application **110** may automatically access, retrieve, and log such EXIF data as certification details associated with the food item **150**F, which is associated with the picture. [0066] In one or more embodiments, additional certification details that may be logged by the user via the food inventory management application **110** may include the how the food item **150**F was butchered, when the food item **150**F was butchered, how the food item **150**F was packaged, a temperature associated with the storage environment in which the food item 150F was finally stored in the food storage cabinet **105**. As discussed above, these food certification details may be used to establish and create the digital record **150**C associated with the food item **150**F. [0067] In one or more embodiments, the food certification details, the food details **150**D, or the

food record **150**C associated with the food item **150**F are compared to certification parameters **150**K, which may be stored in the database **150**. In one or more embodiments, the certification parameters **150**K may be associated with food item health and safety laws and regulations or hunting laws and regulations including, for example, bag limits. In one or more embodiments, if the food certification details, the food details **150**D, or the food record **150**C associated with the food item **150**F satisfy the certification parameters **150**K, the food item **150**F may be certified. [0068] In one or more embodiments, if the food item **150**F is certified, the food inventory management application **110** may generate a scannable certification code, or a certification badge, that is associated with, or includes, the food certification details, the food details **150**D, or the food record **150**C. In one or more embodiments, the scannable certification code may be separate from, but include the same components as, the scannable code **300** such that the scannable certification code may also be affixed to the food item **150**F. In one or more embodiments, the scannable code **300** may be or include the scannable certification code, or include the information and details associated with the scannable certification code.

[0069] In one or more embodiments, the scannable certification code may be affixed to the food item **150**F such that law enforcement, fish and game wardens and officers, or other relevant authorities may scan the scannable certification code and access the food certification details or the certification badge to instantly verify the status of the food item **150**F as certified, and to instantly verify compliance with other relevant law, rules, regulations, or ethical hunting practices. In one or more embodiments, for example, scanning the scannable certification code may display bag limit compliance.

[0070] In one or more embodiments, the provision connection network **805** may only allow and include food items **150**F that have been certified as described above. In one or more embodiments, the provision connection network **805** may allow users to donate certified food items **150**F to food banks that participate in the provision connection network **805**. In one or more embodiments, the food inventory management application **110** may be configured to generate donation receipts for tax purposes when a user donates a food item **150**F via the provision connection network **805**. [0071] FIG. **9** illustrates a method **900** of operating the food inventory management system **100**, according to one or more embodiments.

[0072] At step **905**, the method **900** includes receiving, via a user device, one or more inputs including one or more food details associated with a food item to be stored in a food storage cabinet. In one or more embodiments, the user device may be user device **115**. In one or more embodiments, the one or more inputs may be received via the GUI **155** of the user device **115**. In one or more embodiments, the food details may be food details **150**D. In one or more embodiments, the food storage cabinet may be food storage cabinet **105**.

[0073] At step **910**, the method **900** includes generating, using the user device, a digital record associated with the food item, the digital record including the one or more food details associated with the food item. In one or more embodiments, the digital record may be digital record **150**C. [0074] At step **915**, the method **900** includes generating, using the user device, a scannable code associated with the digital food record. In one or more embodiments, the scannable code may be scannable code **300**.

[0075] At step **920**, the method **900** includes adding, using the user device, the food item to a digital food inventory. In one or more embodiments, the digital food inventory may be digital food inventory **150**E.

[0076] FIG. **10** illustrates a node **1000** for implementing one or more of the example embodiments described above, and/or any combination thereof.

[0077] The node **1000** includes a microprocessor **1000***a*, an input device **1000***b*, a storage device **1000***c*, a video controller **1000***d*, a system memory **1000***e*, a display **1000***f*, and a communication device **1000***g* all interconnected by one or more buses **1000***h*. In several example embodiments, the storage device **1000***c* may include a hard drive, CD-ROM, optical drive, any other form of storage

device and/or any combination thereof. In several example embodiments, the storage device **1000***c* may include, and/or be capable of receiving, CD-ROM, DVD-ROM, or any other form of computer-readable medium that may contain executable instructions. In several example embodiments, the communication device **1000***g* may include a modem, network card, or any other device to enable the node to communicate with other nodes. In several example embodiments, any node represents a plurality of interconnected (whether by intranet or Internet) computer systems, including without limitation, personal computers, mainframes, PDAs, smartphones, and cell phones.

[0078] In several example embodiments, one or more of the components of the systems described above, and/or any combination thereof, include at least the node **1000** and/or components thereof, and/or one or more nodes that are substantially similar to the node **1000** and/or components thereof. In several example embodiments, one or more of the above-described components of the node **1000** and/or the system **100** include respective pluralities of same components.

[0079] In several example embodiments, one or more of the applications, systems, and application programs described above, and/or any combination thereof, include a computer program that includes a plurality of instructions, data, and/or any combination thereof; an application written in, for example, Arena, Hypertext Markup Language (HTML), Cascading Style Sheets (CSS), JavaScript, Extensible Markup Language (XML), asynchronous JavaScript and XML (Ajax), and/or any combination thereof; a web-based application written in, for example, Java or Adobe Flex, which in several example embodiments pulls real-time information from one or more servers, automatically refreshing with latest information at a predetermined time increment; or any combination thereof.

[0080] In several example embodiments, a computer system typically includes at least hardware capable of executing machine readable instructions, as well as the software for executing acts (typically machine-readable instructions) that produce a desired result. In several example embodiments, a computer system may include hybrids of hardware and software, as well as computer sub-systems.

[0081] In several example embodiments, hardware generally includes at least processor-capable platforms, such as client-machines (also known as personal computers or servers), and hand-held processing devices (such as smart phones, tablet computers, personal digital assistants (PDAs), or personal computing devices (PCDs), for example). In several example embodiments, hardware may include any physical device that can store machine-readable instructions, such as memory or other data storage devices. In several example embodiments, other forms of hardware include hardware sub-systems, including transfer devices such as modems, modem cards, ports, and port cards, for example.

[0082] In several example embodiments, software includes any machine code stored in any memory medium, such as RAM or ROM, and machine code stored on other devices (such as flash memory, or a CD ROM, for example). In several example embodiments, software may include source or object code. In several example embodiments, software encompasses any set of instructions capable of being executed on a node such as, for example, on a client machine or server.

[0083] In several example embodiments, combinations of software and hardware could also be used for providing enhanced functionality and performance for certain embodiments of the present disclosure. In an example embodiment, software functions may be directly manufactured into a silicon chip. Accordingly, it should be understood that combinations of hardware and software are also included within the definition of a computer system and are thus envisioned by the present disclosure as possible equivalent structures and equivalent methods.

[0084] In several example embodiments, computer readable mediums include, for example, passive data storage, such as a random-access memory (RAM) as well as semi-permanent data storage such as a compact disk read only memory (CD-ROM). One or more example embodiments of the

present disclosure may be embodied in the RAM of a computer to transform a standard computer into a new specific computing machine. In several example embodiments, data structures are defined organizations of data that may enable an embodiment of the present disclosure. In an example embodiment, a data structure may provide an organization of data, or an organization of executable code.

[0085] In several example embodiments, any networks and/or one or more portions thereof may be designed to work on any specific architecture. In an example embodiment, one or more portions of any networks may be executed on a single computer, local area networks, client-server networks, wide area networks, internets, hand-held and other portable and wireless devices, and networks. [0086] In several example embodiments, a database may be any standard or proprietary database software. In several example embodiments, the database may have fields, records, data, and other database elements that may be associated through database specific software. In several example embodiments, data may be mapped. In several example embodiments, mapping is the process of associating one data entry with another data entry. In an example embodiment, the data contained in the location of a character file can be mapped to a field in a second table. In several example embodiments, the physical location of the database is not limiting, and the database may be distributed. In an example embodiment, the database may exist remotely from the server, and run on a separate platform. In an example embodiment, the database may be accessible across the Internet. In several example embodiments, more than one database may be implemented. [0087] In several example embodiments, a plurality of instructions stored on a computer readable medium may be executed by one or more processors to cause the one or more processors to carry out or implement in whole or in part the above-described operation of each of the above-described example embodiments of the system, the method, and/or any combination thereof. In several example embodiments, such a processor may include one or more of the microprocessor **1000***a*, any processor(s) that are part of the components of the system, and/or any combination thereof, and such a computer readable medium may be distributed among one or more components of the system. In several example embodiments, such a processor may execute the plurality of instructions in connection with a virtual computer system. In several example embodiments, such a plurality of instructions may communicate directly with the one or more processors, and/or may interact with one or more operating systems, middleware, firmware, other applications, and/or any combination thereof, to cause the one or more processors to execute the instructions. [0088] The present disclosure provides a food inventory management application designed for, among others, hunters, homesteaders, and meat enthusiasts to efficiently store, organize, and track their meat inventory across multiple freezers. In one or more embodiments, the food inventory management application integrates with Bluetooth scales and label printers to automate weight capture and labeling, while also tracking expiration, consumption patterns, and meal utilization. In one or more embodiments, the food inventory management application also includes a certification system, which allows hunters to log kill dates, storage conditions, and compliance with bag limits to simplify legal compliance, enable food donations to food banks, and provide proof of ethical hunting practices.

[0089] In one or more embodiments, the food inventory management application: enable users to sign up and sign in securely; allow users to configure their freezers and manage inventory; provides a seamless process for adding cuts of meat, defining storage locations, and tagging items with QR-coded labels; integrates with Bluetooth scales and label printers to streamline weight capture and metadata tagging; maintains an accurate inventory of all stored meat, tracking expiration dates, consumption patterns, and meal projections; suggests recipes based on available meat to reduce food waste; enable users to scan QR codes with a standard phone camera to remove items from inventory, even without app access; provides a certification process that tracks when an animal was killed, how it was stored, and the temperature it was kept at; generate certification labels that help hunters comply with legal bag limits; and allows hunters to donate certified meat to food banks,

integrating with food bank networks for streamlined donations.

[0090] The present disclosure provides a method for food inventory management, comprising: receiving, via a food inventory management application, one or more inputs including one or more food details associated with a food item to be stored in a food storage cabinet; generating, using the food inventory management application, a digital record associated with the food item; wherein the digital record includes the one or more food details associated with the food item; generating, using the food inventory management application, a scannable code associated with the digital record, wherein the scannable code is configured to be affixed to the food item; and adding, using the food inventory management application, the food item to a digital food inventory corresponding to a physical food inventory associated with the food storage cabinet. In some embodiments, the one or more food details include at least one of a food type, a food cut, a food weight, a food storage date, and a food storage location. In some embodiments, the method also includes: accessing, by the food inventory management application, certification parameters; comparing at least one of the one or more food details with the certification parameters; and determining, based on the comparison, that the food item is certified. In some embodiments, a first input of the one or more inputs is received from a user of the food inventory management application and includes a first food detail of the one or more food details; wherein the first food detail includes a food type, a food cut, a food storage date, or a food storage location; wherein a second input of the one or more inputs is received from a food scale in communication with the food inventory management application and includes a second food detail of the one or more food details; and wherein the second food detail includes a food weight. In some embodiments, the scannable code is configured to be scanned by a camera. In some embodiments, the method also includes: transmitting, using the food inventory management application, the scannable code to a printer; wherein the scannable code is configured to be printed by the printer. In some embodiments, the method also includes: generating, using the food inventory management application, a notification associated with the food item; and displaying, via a graphical user interface, the notification associated with the food item. In some embodiments, the notification includes a meal idea associated with the food item. In some embodiments, the notification includes an expiration warning associated with the food item. In some embodiments, the notification is generated based on consumption data associated with a rate at which food items are removed from the digital food inventory. In some embodiments, the method also includes: scanning, using the food inventory management application, the scannable code to retrieve the one or more food details associated with the food item from the digital record; receiving, by the food inventory management application, a request to remove the food item from the digital food inventory; and removing, using the food inventory management application, the food item from the digital food inventory.

[0091] The present disclosure also introduces a method for food inventory management, comprising: generating a food inventory including a plurality of food items and a plurality of food details associated with each respective food item, wherein the food details associated with each respective food item include an anticipated expiration date of the respective food item; generating a recipe catalog including recipes associated with the plurality of food items in the food inventory; collecting consumption data associated with a rate at which food items are removed from the food inventory; identifying, based on the consumption data and the anticipated expiration dates, that a food item of the plurality of food items in the food inventory is an expiring food item that will expire prior to being removed from the food inventory; and generating, based on the identification of the expiring food item, a notification including the anticipated expiration date of the expiring food item and a recipe of the recipe catalog associated with the expiring food item. In some embodiments, the plurality of food items are stored in a food storage cabinet. In some embodiments, the method also includes monitoring internal conditions of the food storage cabinet in which the plurality of food items are stored; wherein identifying that the food item of the plurality of food items is the expiring food item is further based on the internal conditions of the

food storage cabinet. In some embodiments, the food details include a food storage location associated with a location of the respective food item within the food storage cabinet. In some embodiments, the method also includes accessing food safety information associated with safe storage durations for each of the plurality of food items in the food inventory; wherein each anticipated expiration date is based on the food safety information.

[0092] The present disclosure also discloses a food inventory management system, comprising: a food storage cabinet; a printer in wireless communication with one or more processors; a scale in wireless communication with the one or more processors; and a non-transitory computer readable medium having stored thereon a plurality of instructions, wherein the instructions are executed with the one or more processors so that the following steps are executed: receiving a first input including a first food detail associated with a food item to be stored in the food storage cabinet, wherein the first food detail includes a food storage date; receiving, from the scale, a second input including a second food detail associated with the food item to be stored in a food storage cabinet, wherein the second food detail includes a food weight; generating a scannable code associated with the first and second food details and the food item; transmitting the scannable code to the printer, wherein the scannable code is configured to be printed by the printer and subsequently affixed to the food item associated with the scannable code; adding the food item to a food inventory; scanning the scannable code to display the food details associated with the food item; and removing the food item from the food inventory. In some embodiments, the instructions are executed with the one or more processors so that the following additional steps are executed: generating a notification associated with the food item; and displaying the notification associated with the food item. In some embodiments, the notification includes a meal idea associated with the food item. In some embodiments, the notification is generated based on the food storage date associated with the food item; and wherein the notification includes an expiration warning associated with the food item. [0093] In several example embodiments, the elements and teachings of the various illustrative example embodiments may be combined in whole or in part in some or all of the illustrative example embodiments. In addition, one or more of the elements and teachings of the various illustrative example embodiments may be omitted, at least in part, and/or combined, at least in part, with one or more of the other elements and teachings of the various illustrative embodiments. [0094] Any spatial references such as, for example, "upper," "lower," "above," "below," "between," "bottom," "vertical," "horizontal," "angular," "upwards," "downwards," "side-to-side," "left-to-right," "right-to-left," "top-to-bottom," "bottom-to-top," "top," "bottom," "bottom-up," "top-down," etc., are for the purpose of illustration only and do not limit the specific orientation or location of the structure described above.

[0095] In several example embodiments, while different steps, processes, and procedures are described as appearing as distinct acts, one or more of the steps, one or more of the processes, and/or one or more of the procedures may also be performed in different orders, simultaneously and/or sequentially. In several example embodiments, the steps, processes and/or procedures may be merged into one or more steps, processes and/or procedures.

[0096] In several example embodiments, one or more of the operational steps in each embodiment may be omitted. Moreover, in some instances, some features of the present disclosure may be employed without a corresponding use of the other features. Moreover, one or more of the above-described embodiments and/or variations may be combined in whole or in part with any one or more of the other above-described embodiments and/or variations.

[0097] Although several example embodiments have been described in detail above, the embodiments described are example only and are not limiting, and those skilled in the art will readily appreciate that many other modifications, changes and/or substitutions are possible in the example embodiments without materially departing from the novel teachings and advantages of the present disclosure. Accordingly, all such modifications, changes and/or substitutions are intended to be included within the scope of this disclosure as defined in the following claims. In the claims,

any means-plus-function clauses are intended to cover the structures described herein as performing the recited function and not only structural equivalents, but also equivalent structures. Moreover, it is the express intention of the applicant not to invoke 35 U.S.C. § 112(f) for any limitations of any of the claims herein, except for those in which the claim expressly uses the word "means" together with an associated function.

Claims

- 1. A method for food inventory management, comprising: receiving, via a food inventory management application, one or more inputs including one or more food details associated with a food item to be stored in a food storage cabinet; generating, using the food inventory management application, a digital record associated with the food item; wherein the digital record includes the one or more food details associated with the food item; generating, using the food inventory management application, a scannable code associated with the digital record, wherein the scannable code is configured to be affixed to the food item; and adding, using the food inventory management application, the food item to a digital food inventory corresponding to a physical food inventory associated with the food storage cabinet.
- **2**. The method of claim 1, wherein the one or more food details include at least one of a food type, a food cut, a food weight, a food storage date, and a food storage location.
- **3.** The method of claim 1, further comprising: accessing, by the food inventory management application, certification parameters; comparing at least one of the one or more food details with the certification parameters; and determining, based on the comparison, that the food item is certified.
- **4.** The method of claim 1, wherein a first input of the one or more inputs is received from a user of the food inventory management application and includes a first food detail of the one or more food details; wherein the first food detail includes a food type, a food cut, a food storage date, or a food storage location; wherein a second input of the one or more inputs is received from a food scale in communication with the food inventory management application and includes a second food detail of the one or more food details; and wherein the second food detail includes a food weight.
- **5.** The method of claim 1, wherein the scannable code is configured to be scanned by a camera.
- **6.** The method of claim 1, further comprising: transmitting, using the food inventory management application, the scannable code to a printer; wherein the scannable code is configured to be printed by the printer.
- 7. The method of claim 1, further comprising: generating, using the food inventory management application, a notification associated with the food item; and displaying, via a graphical user interface, the notification associated with the food item.
- **8.** The method of claim 7, wherein the notification includes a meal idea associated with the food item.
- **9.** The method of claim 7, wherein the notification includes an expiration warning associated with the food item.
- **10.** The method of claim 7, wherein the notification is generated based on consumption data associated with a rate at which food items are removed from the digital food inventory.
- **11.** The method of claim 1, further comprising: scanning, using the food inventory management application, the scannable code to retrieve the one or more food details associated with the food item from the digital record; receiving, by the food inventory management application, a request to remove the food item from the digital food inventory; and removing, using the food inventory management application, the food item from the digital food inventory.
- **12**. A method for food inventory management, comprising: generating a food inventory including a plurality of food items and a plurality of food details associated with each respective food item, wherein the food details associated with each respective food item include an anticipated expiration

date of the respective food item; generating a recipe catalog including recipes associated with the plurality of food items in the food inventory; collecting consumption data associated with a rate at which food items are removed from the food inventory; identifying, based on the consumption data and the anticipated expiration dates, that a food item of the plurality of food items in the food inventory is an expiring food item that will expire prior to being removed from the food inventory; and generating, based on the identification of the expiring food item, a notification including the anticipated expiration date of the expiring food item and a recipe of the recipe catalog associated with the expiring food item.

- **13**. The method of claim 12, wherein the plurality of food items are stored in a food storage cabinet.
- **14**. The method of claim 13, further comprising: monitoring internal conditions of the food storage cabinet in which the plurality of food items are stored; wherein identifying that the food item of the plurality of food items is the expiring food item is further based on the internal conditions of the food storage cabinet.
- **15**. The method of claim 13, wherein the food details include a food storage location associated with a location of the respective food item within the food storage cabinet.
- **16**. The method of claim 12, further comprising accessing food safety information associated with safe storage durations for each of the plurality of food items in the food inventory; wherein each anticipated expiration date is based on the food safety information.
- 17. A food inventory management system, comprising: a food storage cabinet; a printer in wireless communication with one or more processors; a scale in wireless communication with the one or more processors; and a non-transitory computer readable medium having stored thereon a plurality of instructions, wherein the instructions are executed with the one or more processors so that the following steps are executed: receiving a first input including a first food detail associated with a food item to be stored in the food storage cabinet, wherein the first food detail includes a food storage date; receiving, from the scale, a second input including a second food detail associated with the food item to be stored in a food storage cabinet, wherein the second food detail includes a food weight; generating a scannable code associated with the first and second food details and the food item; transmitting the scannable code to the printer, wherein the scannable code is configured to be printed by the printer and subsequently affixed to the food item associated with the scannable code; adding the food item to a food inventory; scanning the scannable code to display the food details associated with the food item; and removing the food item from the food inventory.
- **18**. The system of claim 17, wherein the instructions are executed with the one or more processors so that the following additional steps are executed: generating a notification associated with the food item; and displaying the notification associated with the food item.
- **19**. The system of claim 18, wherein the notification includes a meal idea associated with the food item.
- **20**. The system of claim 18, wherein the notification is generated based on the food storage date associated with the food item; and wherein the notification includes an expiration warning associated with the food item.