

CLAIMS

1. A computer-implemented system for providing instructions to a user, the system comprising:
 - a sorting apparatus comprising a first location;
 - a memory storing operations; and
 - at least one processor configured to execute the operations for:
 - receiving a first user input of a container identifier, the container identifier corresponding to a physical container comprising one or more items associated with one or more orders, the one or more items of the one or more orders being selected based on availability;
 - updating, in a networked database, a first container location identifier associated with the container identifier to include a physical location of the computer-implemented system;
 - retrieving, from the networked database, one or more item identifiers associated with the container identifier, the item identifiers corresponding to the items;
 - updating, in the networked database, one or more item location identifiers associated with the item identifiers to include the physical location of the computer-implemented system;
 - receiving a second user input of a first item identifier, the first item identifier corresponding to a first item among the items;
 - based on receiving the second user input, assigning, among one or more locations of the sorting apparatus, the first location of the sorting apparatus to the first item identifier;
 - displaying instructions to the user for placing the first item at the first location;
 - updating, in the networked database, a first item location identifier associated with the first item identifier to include the first location,
- wherein displaying the instructions further comprises:

receiving a delay signal that a first order associated with the first location is delayed based on location data aggregated from one or more network-connected systems, the first order being among the one or more orders; and

displaying an indication to the user, in response to the delay signal, to expedite processing the physical container;

sending a control signal to an automated indicator at the first location of the sorting apparatus to finalize a group of items at the first location including the first item in response to the delay signal; and

finalizing the group of items at the first location of the sorting apparatus, wherein finalizing the group of items comprises switching a state of the automated indicator in response to the control signal.

2. The computer-implemented system of claim 1, wherein assigning the first location to the first item identifier comprises:
identifying, among the orders, a first order associated with the first item;
identifying, among the locations, that the first location is associated with the first order; and
assigning the first location to the first item identifier.
3. The computer-implemented system of claim 1, wherein assigning the first location to the first item identifier comprises:
identifying, among the orders, a first order associated with the first item;
determining that the first order is not associated with any of the one or more locations of the sorting apparatus;
identifying, among the locations, one or more empty locations not associated with any order;
determining a total weight of one or more purchased items associated with the first order; and
assigning the first location as one of the empty locations based on the total weight.

4. The computer-implemented system of claim 1, wherein assigning the first location to the first item identifier comprises:
identifying, among the orders, a first order associated with the first item; and
updating a first order information associated with the first order to indicate that the first item is scanned, wherein the first order comprises one or more purchased items, which includes the first item.
5. The computer-implemented system of claim 4, wherein the operations further comprise:
determining that all of the purchased items have been scanned;
displaying a notification that all of the purchase items are scanned; and
displaying the instructions to the user to switch the first location to a finalized state by affecting a state of a corresponding indicator.
6. The computer-implemented system of claim 5, wherein the operations further comprise, in response to switching the first location to the finalized state, transmitting a signal to a networked system to begin another operation on the first order placed at the first location.
7. The computer-implemented system of claim 5, wherein affecting the state of the corresponding indicator comprises:
modifying an automated indicator that signals a packing system configured to package the first order placed at the first location.
8. The computer-implemented system of claim 4, wherein the operations further comprise:
determining that a subset of the purchased items are delayed; and
displaying the instructions to the user for switching the first location to a finalized state.

9. The computer-implemented system of claim 1, wherein displaying the instructions to the user for placing the first item at the first location comprises:
identifying a second item identifier among the item identifiers, wherein the
second item identifier corresponds to a second item among the items and
wherein the first order is also associated with the second item;
assigning the first location to the second item identifier; and
displaying the second item along with the instructions for placing the first item.
10. The computer-implemented system of claim 1, wherein the operations further comprise:
determining that the first order is approaching an associated deadline; and
displaying the instructions to the user for scanning a subset of the items that are
associated with the first order.
11. A computer-implemented method for providing instructions to a user, the method comprising:
receiving a first user input of a container identifier, the container identifier
corresponding to a physical container comprising one or more items
associated with one or more orders, the one or more items of the one or
more orders being selected based on availability;
updating, in a networked database, a first container location identifier associated
with the container identifier to include a physical location of a computer-
implemented system associated with the user;
retrieving, from the networked database, one or more item identifiers associated
with the container identifier, the item identifiers corresponding to the items;
updating, in the networked database, one or more item location identifiers
associated with the item identifiers to include the physical location of the
computer-implemented system;
receiving a second user input of a first item identifier, the first item identifier
corresponding to a first item among the items;

based on receiving the second user input, assigning, among one or more locations of a sorting apparatus, a first location of the sorting apparatus to the first item identifier;

displaying instructions to the user for placing the first item at the first location;

updating, in the networked database, a first item location identifier associated with the first item identifier to include the first location,

wherein displaying the instructions further comprises:

receiving a delay signal that a first order associated with the first location is delayed based on location data aggregated from one or more network-connected systems, the first order being among the one or more orders; and

displaying an indication to the user, in response to the delay signal, to expedite processing the physical container;

sending a control signal to an automated indicator at the first location of the sorting apparatus to finalize a group of items at the first location including the first item in response to the delay signal; and

finalizing the group of items at the first location of the sorting apparatus, wherein finalizing the group of items comprises switching a state of the automated indicator in response to the control signal.

12. The computer-implemented method of claim 11, wherein assigning the first location to the first item identifier comprises:

identifying, among the orders, a first order associated with the first item;

identifying, among the locations, that the first location is associated with the first order; and

assigning the first location to the first item identifier.
13. The computer-implemented method of claim 11, wherein assigning the first location to the first item identifier comprises:

identifying, among the orders, a first order associated with the first item;

determining that the first order is not associated with any of the one or more locations of the sorting apparatus;

identifying, among the locations, one or more empty locations not associated with any order;
determining a total weight of one or more purchased items associated with the first order; and
assigning the first location as one of the empty locations based on the total weight.

14. The computer-implemented method of claim 11, wherein assigning the first location to the first item identifier comprises:
identifying, among the orders, a first order associated with the first item; and
updating a first order information associated with the first order to indicate that the first item is scanned, wherein the first order comprises one or more purchased items, which includes the first item.
15. The computer-implemented method of claim 14 further comprising:
determining that all of the purchased items have been scanned;
displaying a notification that all of the purchase items are scanned; and
displaying the instructions to the user to switch the first location to a finalized state by affecting a state of a corresponding indicator.
16. The computer-implemented method of claim 15, wherein affecting the state of the corresponding indicator comprises:
modifying an automated indicator that signals a packing system configured to package the first order placed at the first location.
17. The computer-implemented method of claim 14 further comprising:
determining that a subset of the purchased items are delayed; and
displaying the instructions to the user for switching the first location to a finalized state.

18. The computer-implemented method of claim 11, wherein displaying the instructions to the user for placing the first item at the first location comprises:
identifying a second item identifier among the item identifiers, wherein the
second item identifier corresponds to a second item among the items and
wherein the first order is also associated with the second item;
assigning the first location to the second item identifier; and
displaying the second item along with the instructions for placing the first item.
19. The computer-implemented method of claim 11 further comprising:
determining that the first order is approaching an associated deadline; and
displaying the instructions to the user for scanning a subset of the items that are
associated with the first order.
20. A computer-implemented system for an efficient sortation of items by a user
working under a limited access to information, the system comprising:
a sorting apparatus comprising a first location;
a memory storing operations; and
at least one processor configured to execute the operations for:
receiving a first user input of a container identifier, the container identifier
corresponding to a first physical container comprising one or more
items associated with one or more orders, the one or more items of
the one or more orders being selected based on availability;
updating, in a networked database, a first container location identifier
associated with the container identifier to include a physical location
of the computer-implemented system;
retrieving, from the networked database, one or more item identifiers
associated with the container identifier, the item identifiers
corresponding to the items;
updating, in the networked database, one or more item location identifiers
associated with the item identifiers to include the physical location
of the computer-implemented system;

receiving a second user input of a first item identifier, the first item identifier corresponding to a first item among the items;
identifying, among the orders, a first order associated with the first item, wherein the first order comprises a second item associated with a second physical container;
based on receiving the second user input, assigning, among one or more locations of the sorting apparatus, the first location of the sorting apparatus to the first item identifier;
displaying instructions to the user for placing the first item at the first location;
updating, in the networked database, a first item location identifier associated with the first item identifier to include the first location;
receiving, from one or more network-connected systems, an indication that the second physical container is delayed based on a second container location identifier associated with the second physical container;
displaying additional instructions to the user, in response to the indication, to finalize the first location without the second item;
sending a control signal to an automated indicator at the first location of the sorting apparatus to finalize a group of items at the first location including the first item in response to the delay signal; and
finalizing the group of items at the first location of the sorting apparatus, wherein finalizing the group of items comprises switching a state of the automated indicator in response to the control signal.