

```
graph LR; GK[Ghost Kitchen [Software System]] <--> SF[Smart Fridge (Cloud)]; GK <--> K[Kiosk]; GK <--> IP[Identity Provider]; GK <--> SM[Supplier Management (ChefTec)]; GK <--> AS[Accounting Software]; GK <--> PP[Payment Processor];
```

The diagram illustrates the Ghost Kitchen [Software System] architecture. A central blue rounded rectangle labeled "Ghost Kitchen [Software System]" is connected to six orange rounded rectangles. On the left side, the connections are to "Smart Fridge (Cloud)", "Kiosk", and "Identity Provider". On the right side, the connections are to "Supplier Management (ChefTec)", "Accounting Software", and "Payment Processor". Each connection is represented by a double-headed arrow, indicating bidirectional communication between the central system and each peripheral component.

```
graph TD
    subgraph Actors
        direction TB
        C1((Customer  
[Person]  
Customer of Farmacy Foods))
        C2((Online Customer  
[Person]  
Customer of Farmacy Foods))
        C3((Farmacy Food Employee  
[Person]  
Employee of Farmacy Foods))
    end

    subgraph Systems
        direction TB
        S1[Smart Fridge  
[Software System]  
Automated Fridge]
        S2[Kiosk  
[Software System]  
Representative run kiosk]
        S3[Ghost Kitchen  
[Software System]  
Allows users to have visibility of what items are available, purchase, and pick up items at any one of their points of sale]
        S4[Identity Provider  
[Software System]  
Trusted Identity Provider]
        S5[Payment Processor  
[Software System]  
Submits card purchases into payment network]
        S6[Supplier Management System  
[Software System]  
ChefTec]
        S7[Accounting System  
[Software System]  
Quickbooks]
    end

    C1 -.->|Uses| S1
    C1 -.->|Uses| S2
    S1 -.->|Uses [REST]| S3
    S2 -.->|Uses [REST]| S3
    C3 -.->|Uses web portal| S3
    S3 -.->|Inventory alerts [SMS, Email, Text]| C3
    C2 -.->|Uses website, mobile app| S3
    S3 -.->|Notifications Email, SMS, Text| C2
    S3 -.->|Sends Accounting data [REST]| S7
    S3 -.->|Alerts [REST]| S6
    S3 -.->|Uses [REST]| S4
    S3 -.->|Uses [REST]| S5
```

```
graph TD
    subgraph External_Systems [External Systems]
        direction TB
        IP[Identity Provider  
[Software System]]
        K[Kiosk  
[Software System]]
        SF[Smart Fridge  
[Software System]]
        W[Website  
[Software System]]
        MD[Mobile Device  
[Software System]]
    end

    subgraph API_Layer [API Layer  
[Component: spring mvc REST controller]]
        direction TB
        API[API Layer  
[Component: spring mvc REST controller]]
    end

    subgraph Internal_Systems [Internal Systems]
        direction TB
        FR[Food Recommendation  
[Component: spring bean]  
Recommends food options based on customer preferences, nutrition recipes and inventory]
        NR[Nutrition & Recipes  
[Component: spring bean]  
Provides nutrition and recipes info based on context(health targets and dietary needs)]
        CIDV[Customer ID&V  
[Component: spring bean]  
Manages customer identification/profile info and food preferences]
        GKO[Ghost Kitchen Orchestrator  
[Component: spring bean]  
Orchestrates processing for Ghost kitchen]
        I[Inventory  
[Component: spring bean]  
Maintains inventory for Ghost kitchen  
Produces inventory info based on availability and user location]
        P[Promotions  
[Component: spring bean]  
Handles coupons and promotional pricing]
        PP[Payment Processing  
[Component: spring bean]  
Finalizes and processes payment]
        CN[Customer Notification (Feedback, Surveys etc.)  
[Component: spring bean]  
Notifies customers via email, text, SMS]
    end

    subgraph External_Services [External Services]
        direction TB
        PP_ext[Payment Processor  
[Software System]  
Quickbooks]
        AS[Accounting System  
[Software System]  
ChefTec]
        SMS[Supplier Management System  
[Software System]  
ChefTec]
    end

    DB[(Database  
[Component: mySQL])]

    IP --> API
    K --> API
    SF --> API
    W --> API
    MD --> API
    API --> FR
    API --> NR
    API --> CIDV
    API --> I
    API --> CN
    FR --> NR
    NR --> GKO
    CIDV --> GKO
    GKO --> I
    GKO --> P
    GKO --> PP
    GKO --> CN
    I <--> DB
    CN <--> DB
    PP_ext -.-> PP
    AS -.-> AS
    SMS -.-> SMS
```