STAR GROUP

UI DEVELOPMENT KNEXT FUTURECAFÉ

Development and implementation of a user interface for ordering and payment processes of an automated coffee shop

THE DEVELOPMENT AND IMPLEMENTATION OF A USER INTERFACE FOR PROCESSING ORDERS AND ORDERS AND PAYMENTS IN THE KNEXT FUTURECAFÉ.

The project includes the development of an intuitive and efficient user interface for an ordering and payment platform. This platform is provided on three ordering terminals in the KNEXT FutureCafé and enables customers to customers to place orders and make payments directly at the terminal.

USER INTERFACE:

Developed with Angular to ensure a dynamic and responsive user experience.

COMMUNICATION AND INTEGRATION:

A COM server handles communication with the system and database, integrating all components on the machine.

DATA TRANSFER:

In the future phase of the project, the transfer of data via a Kafka interface to the SAR Group is planned to enable seamless integration and data analysis.

The user interface developed is specifically tailored to the needs of the KNEXT FutureCafé and will be used there to optimize and automate the ordering and payment process.

THE SYSTEM COMPONENTS

A comprehensive ordering and payment platform was developed for the KNEXT FutureCafé in order to offer customers a offer customers a powerful and efficient ordering process. At its core, the project comprises three central system components:

ORDERING INTERFACE

The user-friendly interface enables customers to customers to select products, place orders and place orders and make payments. It forms the heart of the ordering process in the KNEXT FutureCafé.

- USER-FRIENDLY INTERFACE:

Enables customers to easily select and order of products by customers.

- PRODUCT AVAILABILITY:

The product availability check is integrated to display a "sold out" status for unavailable available products.

- PAYMENT SYSTEM INTEGRATION:

Ensures a seamless payment experience directly via the ordering interface.

- TERMINAL AND MACHINE MANAGEMENT:

Functions for deactivating the terminal, for switch off the machine and to manage recipes and recipes and fill levels are available.

- SYNCHRONIZATION WITH THE SPS:

The ordering interface synchronizes with the PLC and manages actions such as happy hour or special events.

PAYMENT TERMINAL

The payment terminal is equipped with the Nayax payment system which supports various payment payment methods worldwide. It enables real-time payments, including contactless payments as well as transactions with credit cards, prepaid cards, NFC, Apple Pay, Samsung Pay and many other payment services.

ILLUSTRATION EXAMPLE USER INTERFACE
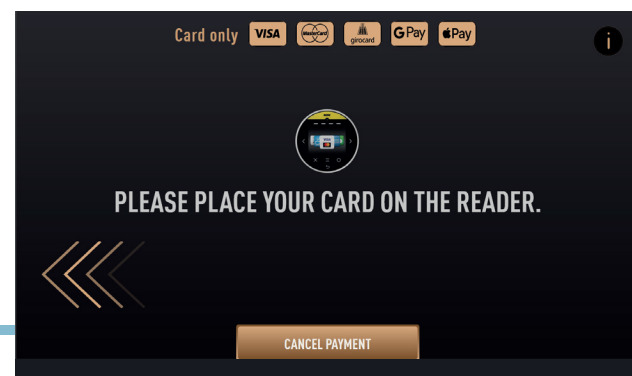
ADMINISTRATION INTERFACE

The existing administration interface is used by external companies for the maintenance and of the cafés. It offers important functions such as deactivating the terminal, switching switching off the coffee machine, managing products products and synchronization with the programmable programmable logic controller (PLC). In addition, communication with the PLC via with the PLC via OPC UA enables the exchange of data, which contributes to the effective control and of the machines.

DARSTELLUNGSBEISPIEL USER INTERFACE

SUCCESS FACTORS OF THE ORDERING AND PAYMENT SYSTEM

Several key factors are decisive for the success of the ordering and payment system in the KNEXT FutureCafé. These factors ensure a high level of customer satisfaction, efficient operating processes and reliable payment processing.

ORDER INTERFACE:

An intuitive and reliable ordering interface is crucial for customer satisfaction and the efficiency of the ordering process. It must be easy to use and function smoothly.

ADMIN INTERFACE:

A feature-rich and easy-to-use admin interface is essential for efficient café maintenance and support. It facilitates technical support and on-site management of equipment.

INTEGRATED PAYMENT SYSTEM:

The seamless integration of a versatile and secure payment system such as Nayax is a key success factor. It ensures that all common payment methods are supported and that payments are processed quickly and reliably. payments can be processed quickly and reliably. can be processed quickly and reliably.

ILLUSTRATION EXAMPLE USER INTERFACE

Deine Bestellung wird zubereitet!

BESTELLUNG

56%

Americano
Espresso

THE CHALLENGES OF CONTACTLESS CUSTOMER COMMUNICATION

One of the biggest challenges of the project is dealing with problematic orders. To solve these, a QR code is implemented on the receipt. This QR code makes it possible to check and process problems and chargebacks efficiently.

FUTURE PROSPECTS OF THE SYSTEM

The system is being continuously developed to meet user requirements and integrate new technological possibilities. Here are some of the most important future prospects:

✓ **Communication about Kafka:** In the future, data streams will be integrated via Kafka, enabling transmission to SAR for centralized control and analysis. This integration will ensure more efficient and more reliable data communication.

✓ **Telemetry and maintenance:** The system transmits status messages directly to service personnel via an instant messaging group to keep them informed and updated in a timely manner. This improves response time and ensures smooth operation.

✓ **Sensor integration:** The use of temperature sensors for different product categories is being introduced. These sensors monitor the products based on expiration date and temperature conditions and report relevant information to ensure the quality and safety of the products.

✓ **Administration interface:** The existing administration interface will continue to be used and optimized to make it easier for external companies to manage and support the machines. This includes functions such as deactivating terminals, switching off machines, recipe management and synchronization with the PLC.

✓ **Forecasting and analysis:** Historical data is used to create forecasts for product orders, weather conditions, water usage and other operational aspects. These analyses help to optimize operations and make informed decisions.

✓ **Centralized management:** A centralized server application called Knext Connect is being developed. This application will manage all systems centrally, perform analyses and controlling and provide evaluations of order processes, billing and maintenance. and maintenance. This central administration will significantly increase the efficiency and transparency of operational processes.

These continuous improvements and enhancements will not only make the system more powerful and user-friendly, but also future-proof and adaptable to changing requirements and technological developments. The project aims to create a robust and user-friendly platform that not only makes ordering and payment processes efficient, but also enables centralized management and analysis of operational data. By integrating and analyzing the data in the future, better operational decisions will be made and the customer experience will be continuously improved.

SAR GROUP

Do you have any questions about the project?

Then please contact us by e-mail

to its@sar.biz

Your contact person

Ralf Zeilhofer   Markus Grundl

www.sar.biz