

# DESIGN AND IMPLEMENTATION OF DESCHMAN INTELLIGENT DOOR LOCK SALES WEBSITE

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## ABSTRACT

In the past five years, the rapid progress of science and technology has also spurred the rapid rise of the economy, and the people's income level has also made significant progress and changes. Therefore, there is an urgent need for a high-quality living standard. In such a superior environment, the smart home products industry also came into being and quickly gained a foothold. As one of the most popular products, intelligent door lock has gradually entered the public's vision. However, due to its high customer unit price and customers' concerns about safety, it has brought great challenges to the promotion and sales of intelligent door locks. Making a professional sales website has naturally become one of the important means to establish brand image, improve customer trust and increase product sales.

**Keywords:** Door Lock Sales Website, Internet of Things, New Furniture

## 1. INTRODUCTION

### 1.1. THE RESEARCH BACKGROUND

In recent years, Chinese people with good incomes have become increasingly eager to improve their quality of life. Let the user and save worry and labor smart home industry with this spring breeze, the expansion is very considerable. Door lock, as a high frequency of household products in People's Daily life, its intelligence is the general trend of nature. Domestic smart lock consumers are mainly middle- and high-level-income households represented by Jiangsu, Zhejiang and Shanghai.

By 2020, the sales volume of domestic smart lock has broken through to 3200W sets, and the market penetration rate has reached more than 10% at an extremely fast speed. In the 2021 Singles' Day news of Deschmann, a leading intelligent door lock company, they proudly showed to users that their sales volume reached 200 million on Singles' Day. With a wide range of markets and diverse consumption channels, Xiaomi, Huawei, and other big manufacturers have also entered the field of intelligent door locks. How to further improve brand awareness and door lock sales has become a new challenge.

With the continuous advancement of the Internet era, e-commerce platforms into thousands of households, online shopping has become the mainstream channel of people's consumption, the domestic e-commerce in the past three years is high cloud gathered, how many brand merchants came out of the world, with the pioneer of the market thinking to build IP, in this flood occupied some places, among which there are already factory owners stand out. The Internet economy has the advantages of convenience, and from the point of view of users, improve the after-sales mechanism of merchants, to solve users' worries. In this way, the trust is greatly improved so as to have a wide range of customer groups, the first to enter the business began to taste a lot of benefits, thus prompting more and more promising people into the battlefield of e-commerce. After years of rapid development, domestic e-commerce has successfully walked in the forefront of the world, the speculation and analysis of users' ideas has been extremely in-depth, the innovation of products in the industry is increasingly slow, and the gap between businesses is gradually reduced. Therefore, the competition has become particularly fierce. Only by grasping the latest market trends, improving product deficiencies, solving the main pain points of users, and improving brand awareness, can we break through the waves in such a fierce battlefield. Online sales have become the main channel for the sale of goods. The accurate introduction of pre-sale products, the guarantee of logistics aging during sale and the guarantee of after-sales repair and replacement service are the cornerstone of becoming a brand store based on the e-commerce platform.

## **1.2. PURPOSE AND SIGNIFICANCE OF THE STUDY**

The goal of this graduation design is to develop Deschman smart door lock sales website. Online shopping has become the mainstream consumption model of today's society, the development of online sales websites can provide a new channel for the door lock, as long as there is a display of this necessity is in demand, sales channels become diversified at the same time gradually improve the visibility of the product, but also can more comprehensively show the product in front of consumers and all kinds of enterprises, help consumers choose the right door lock, To facilitate the transaction.

The establishment of a multi-source online sales system has improved the popularity of brands and products to a great extent, and gradually transformed from offline real economy to new retail economy. A variety of products with distinctive characteristics are displayed in one interface with clear grouping, concise and clear, and the introduction of products should be improved as far as possible to provide a good shopping platform for customers. While allowing customers enough time to make selection and comparison, we also improve the pre-sales customer consultation service to avoid the problems of offline physical stores being unable to receive customers in peak hours and customers not having time to shop. The biggest advantage of the sales website is to place orders anytime and anywhere and receive

goods without leaving home. As such and to help users solve the problem, the natural increase in sales has a great help.

The design goal of this website is to expand the sales channels of intelligent door locks, improve the conversion rate of customer orders, improve the user's shopping experience, and optimize the management operation of the background, basically do not have any obstacles to the use of users, the interface is simple and passable, there is no lack of function of the website. Potential customers of intelligent door locks can browse this website to strengthen their knowledge and understanding of products, so as to promote the formation of purchase desire, and then reach a deal. Of course, the after-sales link is also the essential focus, for customers to solve the worries, there is a virtuous cycle of re-purchase and old customers to bring new customers, which is also the precipitation and foothold of a brand.

### **1.3. RESEARCH STATUS AND EVALUATION AT HOME AND ABROAD**

According to a report released by HNYResearch, the global smart lock market scale was 1.24 billion dollars in 2017, and the global smart lock market scale will reach 2.61 billion dollars in 2023, with a compound annual growth rate of 13.26%. However, major smart lock brands surveyed in this report do not include major Chinese smart lock brands [Xue et al. \(2021\)](#).

In recent years, the development of a new generation of information and communication technology, represented by Internet of Things, big data and artificial intelligence, provides the opportunity for our country to promote smart home and build smart life to further standardize and scale development, which also brings great changes to our life [Zheng \(2021\)](#). According to the "China Smart Home Devices Report" released by IDC, nearly 150 million smart home devices were shipped in China in 2018. In 2020, shipments of China's home temperature control equipment market [Zheng \(2021\)](#), intelligent lighting equipment market and home security monitoring equipment market increased by 250.1%, 71.4% and 14.4%, respectively. According to the "2020 Smart Home Industry Research Report" released by 36kr Research Institute, in 2020, China's smart home market scale will reach 206.4 billion yuan, with a year-on-year growth of 45.15%. By 2023, the market scale will reach 517.6 billion yuan, with huge development space for the industry [Zheng \(2021\)](#).

In the next 5 to 10 years, the total demand of intelligent door locks in China will exceed 30 million sets, and the total output value will exceed 100 billion yuan [3]. This means that the intelligent door lock industry still has great potential in the future market [Yao \(2020\)](#). The huge market prospect is very tempting for many enterprises, including the giants of household appliances, Internet, security and even mobile phone industry, to seize the market one after another, and the competition for 1000-yuan intelligent door locks in China is fierce [Yao \(2020\)](#).

The domestic smart home market has entered the fast track of development [Yuanzhen \(2021\)](#). As an entry-level product of smart home, compared with traditional mechanical locks, the appearance of smart locks simplifies the previous complicated unlocking process [Yuanzhen \(2021\)](#), improves people's unlocking experience, attracts consumers' attention, and rapidly increases market penetration. Today, there are a variety of intelligent door locks on the market, not only with perfect functions and high security performance, but also with continuous upgrading and progress. From mechanical and electronic door lock to fingerprint

lock to face lock, to the forthcoming development of pupil lock, constantly upgraded identification methods, for the majority of families to ensure housing, property security, provides a solid guarantee. Unlock by fingerprint, password, swipe card or traditional key [Changyong \(2020\)](#). Face recognition has a camera, the camera installed in the normal position [Changyong \(2020\)](#), face recognition has. At the same time, after getting through the cloud, you can use APP to open it [Changyong \(2020\)](#). When the guest clicks at the door, the call at the door can be heard through the 4G network [Changyong \(2020\)](#), and the lock can be unlocked.

With the development and improvement of intelligent door lock and its supporting software, coupled with the maturity of the development of the Internet economy, it has become inevitable to create a door lock brand with the influence of online and offline. First of all, intelligent door locks have a great demand, with online sales, to open up a new channel; Secondly, online sales save a lot of time and space costs. Meanwhile, offline distribution only needs a display facade to improve brand awareness and handle after-sales installation services, which greatly saves costs and caters to the consumption preferences of contemporary young people with rich purchasing power. At present, smart door locks are widely used in public rental and long-rented apartments [Dong \(2020\)](#). In the face of the epidemic, smart door locks play an important role in the management and control of urban floating population and outside tenants. Wang Baotherush said that at present, the most important thing for the application of smart door locks in long-rented apartments and public rental houses [Dong \(2020\)](#) is to ensure the authenticity and accuracy of information. The mobile phone APP used in combination with the smart door lock should support the input and upload of face information and ID card information [Dong \(2020\)](#) to ensure the rapidity and accuracy of identity information recognition.

#### **1.4. MAIN CONTENT AND CHAPTER ARRANGEMENT**

Before designing the website, I had a three-month internship in a domestic first-class intelligent door lock company. This short and fulfilling experience also opened the door of the intelligent door lock industry for me. Intelligent door lock is the product of people's demand for intelligent home after entering the era of Internet of Things. Therefore, I will start to arrange the functions of the website according to the demand, and also browse and analyze the cases of excellent sales websites for learning. In addition, I will analyze the shortcomings of the current sales website according to the new requirements of the new ecology and solve and improve it in the design. Make the whole website more convenient and worry less, improve consumers' shopping experience.

Because the smart door lock in recent years, under the shadow of the epidemic has developed more rapidly, so I hope to design a smart door lock sales website. This website, from my perspective, should be divided into two main layers. These are also the two layers that most e-commerce platforms have. One layer is for users to use, and the other is for our merchants to operate and use. So that's front and back. In the foreground, I will mainly realize the purchase behavior of users; Background, will mainly achieve the operation of the loading behavior.

To complete the user's purchase behavior of the front desk, the first to have the function of registration and login, which is to retain and identify the user and collect some information of the user, followed by the product classification display, add some functions to the shopping cart, which is also the user to visit the website to do some things. It is left to the operation of the background, the most core is to achieve the editing and adjustment of commodity information, and then the goods to the

mall. The next is some auxiliary functions, viewing users and statistics about sales and so on.

For this paper, I have divided it into six chapters. The first chapter is the introduction, which is mainly an overview of what I want to study in the whole article and some conditions of the intelligent door lock industry. It also includes the latest progress of the research conducted by professionals on the industry and the development of the types of door lock functions, which I have learned from the literature of the Know network. The second chapter is the feasibility of the design analysis, mainly to consider one is the development prospects of the industry, in the end there is no benefit and my programming language and understanding of the sales website; The third chapter is to do some preliminary preparation of the design, mainly to write some website organizing thinking logic analysis it needs to complete the function; The fourth chapter is mainly about the database, which relates to the website some functions are perfect and comprehensive; The fifth chapter is the success of the display, through the early thinking and improvement, the final effect of the website is shown in the fifth chapter; Chapter VI summary plate, we do everything to have a certain thinking and perception, the process of doing bad, how to optimize the next time, do good places, will be out of the summary. Above, is the main level division of this paper.

## **2. SYSTEM REQUIREMENT ANALYSIS**

### **2.1. SYSTEM DESIGN OBJECTIVES**

In e-commerce, China is a rising star. Early foreign e-commerce platforms entered China, but did not gain a lot of profits, but this stimulated the emergence of domestic e-commerce platforms. The domestic e-commerce, represented by Taobao, has opened the door of China's e-commerce. Now, time has changed, and the development of domestic e-commerce is really surprising to the world. As a back-up, spiritualism in China has completely surpassed its predecessors. E-commerce platforms now account for the vast majority of daily goods transactions in China. To study the psychology of consumers, to stimulate consumption, this set of our shopkeepers have studied fire groups. Under such a hot environment, the economic benefits of designing a sales website are absolutely intuitive to achieve.

### **2.2. TECHNICAL FEASIBILITY**

The core of shopping website is to let users can easily find what they want, this is relatively easy to achieve. The development environment of this time is IntelliJ IDEA software, which is also highly praised in the industry. Such sites have few configuration requirements for devices and take up minimal resources. I use JSP this language, is also the most learned during the university of a language. For the writing of shopping website, it is completely adequate, and can achieve most of the functions, to meet the needs of users and operations, and there will not be too much redundant maintenance problems. It's also feasible in terms of technology.

### **2.3. OPERATION FEASIBILITY**

Deschman intelligent door lock sales website overall page of my design is relatively simple and generous, the user can open a flexible overhand experience operation, to avoid a relatively complex operation. In this website, consumers only need to complete the basic registration login, then they can select products to complete the order. The classification and induction of products are also organized



in more detail, so that users can accurately find the products they want and can also browse at will. For users, the quality of a website is to be able to operate on the premise of simple can also be a long time many times the operation of the problem, the website in the interface is simple and do not lose the function of the premise, after I repeatedly in different computers on the test, most of the computer can run perfectly, the test results have reached my expected effect. So, the operation of the site has no problems, it can be completed.

### **3. SYSTEM ANALYSIS**

#### **3.1. REQUIREMENT ANALYSIS**

Because of my internship experience in an e-commerce company, and I am also a heavy fan of online shopping. The combination of the two, along with my own analysis, resulted in user demand. So, I decided to Deschman smart door lock sales website is divided into the use of front desk buyers and background business operation management, that is, the two most active roles of the sales website buyers and sellers, according to the different needs of users to set up the realization of the function, so as to meet the needs.

#### **3.2. FRONT-END CONSUMER ANALYSIS**

Let me briefly state some of the requirements of the website. Some of the operations that buyers will do when they enter the website will first look at the display of goods after they are interested in registering as a member of the website, and then there will be purchase behavior, so some of the needs of users are as follows:

- 1) register the account to complete the login:** after the user enters the website, the first will go to roughly look at the content of the website, have an interest, want to further understand, at this time to register as a member of the website, and then login can carry out subsequent operations.
- 2) browse to buy goods:** become a member of this website users, has a certain desire to buy goods, at this time he will further understand the classification and function of the product, as well as the price.
- 3) Buy goods:** After customers have generally browsed the goods and understood their functions, they will generally choose two or three products they are satisfied with in the shopping cart to compare the price function and other elements, and finally select a satisfactory one to place an order.
- 4) order view:** after the completion of the purchase action, the user may observe the order status while waiting for the receipt of goods.

#### **3.3. BACKGROUND ADMINISTRATOR ANALYSIS**

The administrator of the background, that is, the operator of the business, their daily work is to load the goods, and then pay attention to the users and sales of the website:

- 1) User view:** The operation can check the number of registered members of this website in the background, that is, how many potential customers, and forecast future sales.
- 2) Commodity Adjustment:** this module is the most important operation of the operation, they need to load the website, in order to attract more customers, but also according to different activities to adjust the price of the

main picture of the commodity and the description of the title, but also some detailed classification of the goods on the shelf, in this website is professional at the same time, but also convenient for customers to find.

- 3) **Order Operation:** users choose their favorite lock, after successful payment, start to wait for the merchant delivery. At this point, the operators have to check the order, contact the warehouse delivery, and then the background synchronization to contact the customer your goods have been shipped for you.

### 3.4. DATA FLOW ANALYSIS

Data is the flow of information, as long as you understand how the data flow, in order to more clearly grasp the operation path of the website. All actions taken by users of the site generate some data, which is sent to a specified place. This is an identifiable instruction that will not proceed until the next implementation receives this instruction. If the flow of data is not correct, then the overall performance will be wrong. Therefore, we need to analyze the data flow and understand its overall trend, so as to facilitate the next step.

### 3.5. SYSTEM DATA DICTIONARY

#### 3.5.1. MAIN DATA TABLES

**Table 1**

Table 1 User Information Table
Name: User registration information
Overview: The user at the time of registration to fill in the account phone number address and other information
Where: Visitor registration function
Destination: New user information table (busertable table)

**Table 2**

Table 2 Administrator Information
Name: indicates the administrator information
Overview: Information about the administrator when registering an account
Source: administrator registration
Where: New administrator information table (ausertable)

**Table 3**

Table 3 Order Information Table
Name: Order details
Overview: Some information generated by the user when placing an order, including the amount of time, etc
Where: The user completes the payment and submits the order
Where to go: new order information table (orderbasetable table)

**Table 4**

<b>Table 4 Commodity Information Table</b>
Name: Product information
Overview: Information about goods submitted by administrators in the background
Coming: The administrator publishes the product
Destination: Create a goodstable

**Table 5**

<b>Table 5 Commodity Category Table</b>
Name: Product category
Overview: The administrator adds product category information in the background
Where: The administrator publishes the product categories
Where: New product information table (goodstype table)

### 3.5.2. MAIN DATA ITEMS

**Table 6**

<b>Table 6 User information</b>
Name: User number
Description: User number, not null value
String length: Int (11)

**Table 7**

<b>Table 7 Administrator Information</b>
Name: Number of the administrator
Description: Administrator number, cannot be null
String length: Int (11)

**Table 8**

<b>Table 8 Commodity Information</b>
Name: Commodity number
Description: Commodity number, not null value
String length: Int (11)

**Table 9**

<b>Table 9 Commodity Category Information</b>
Name: Commodity category number
Description: Commodity number, not null value
String length: Int (11)



## 4. SMART DOOR LOCK SALES WEBSITE DESIGN

### 4.1. SYSTEM FUNCTION DESIGN

The graduation design goal is to design a smart door lock sales website. When I look at other websites in the world, I find that the main function of these websites is to help buyers and sellers make transactions through the Internet. Therefore, the goal of my website design has come out. The front desk for buyers is mainly to become members, purchase goods and view orders. The second is the background for sellers to use, mainly to provide commodity display and editing functions, as well as some user sales data statistics.

#### 4.1.1. SYSTEM FOREGROUND FUNCTIONS

After systematic analysis, some functions of the front desk of the website have also been determined down, sales website essential product display and purchase function, which is also the core of the website profit, and then the difference between tourists and users of the registration login function, finally is some order view function.

- 1) **Registration login:** This function is mainly to let the free customers on the Internet, become our users. Secondly, it is to collect some basic information for the convenience of the following delivery.
- 2) **Commodity purchase:** the main module of the mall, accounting for a lot of space, the only source of income, a large area of intelligent door lock display product.
- 3) **Personal information:** mainly to collect detailed information, accurate delivery of goods to the hands of users.
- 4) **Shopping cart:** a temporary storage of goods, mainly in order to facilitate the user comparison to choose, in the end that type of door lock is suitable for their own home situation, but also can increase the number of purchases, convenient mass purchase customers.
- 5) **Order information:** it is convenient for customers to check the status of the things they bought when they are waiting for the goods.

#### 4.1.2. SYSTEM BACKGROUND FUNCTIONS

The background of the website mainly serves some operation personnel, and I personally have nearly one year's working experience in an e-commerce company. Although I could not create the top background of a large app similar to Tmall, I also improved the functions of the background of this website.

- 1) **Member module:** convenient operation to view the number of users of their own website, to analyze whether the need for drainage.
- 2) **Commodity information module:** the core work of operation. In this module, the function of daily product removal can be completed, and the main picture, description, price, and other information of products can be timely changed. It is also the most frequently used module.
- 3) **Order information module:** mainly view the orders generated after customers place orders, timely contact the warehouse for rapid delivery processing, and then inform the customers that your goods have been shipped.

- 4) **Sales report management:** After the administrator logs in at the background, he can view the sales volume of products on the website, the number of sales of different products, and the amount of sales.

## 4.2. DATA TABLE DESIGN

The Deschmann sales site uses a MySQL database to process associated data. The following is the structure of the tables in the database.

**Table 10**

Table 10 User Information Table Busertable				
Field Name	Type	Length	Allows Empty	Field Descriptions
uid	Int	11	No	User id
bemail	Varchar	50	No	mailbox
bpwd	Varchar	50	No	password
baddress	Varchar	50	Yes	address
bphone	Varchar	50	Yes	telephone
bname	Varchar	50	Yes	name
bsex	Varchar	50	Yes	gender

**Table 11**

Table 11 Product Category Table Goodstype Table				
Field Name	Type	Length	Allows Empty	Field Descriptions
id	Int	11	No	Class number
typename	Varchar	50	No	Category name

**Table 12**

Table 12 Commodity Information List Goods List				
Field Name	Type	Length	Allows Empty	Field Descriptions
id	Int	11	No	Commodity number
gname	Varchar	50	Yes	Commodity name
gprize	Double		Yes	Commodity price
gpicture	Varchar	50	Yes	Product picture
goodstype_id	Int	11	Yes	Commodity class number

**Table 13**

Table 13 Order Table Oderbasetable Table				
Field name	Type	length	Allows empty	Field Descriptions
id	Int	11	No	Order number
busertable_id	Int	11	No	User ID
amount	Double		No	quantity
status	Varchar	11	No	state
orderdate	Varchar	100	No	Date of order

**Table 14****Table 14 Shopping Cart Table Cart Table**

Field Name	Type	Length	Allows Empty	Field Descriptions
Id	Int	11	No	Shopping cart id
busertable_id	Int	11	No	User number
goodstable_id	Int	11	No	Quantity of goods
shoppingnum	Int	11	No	Subtotal amount

**Table 15****Table 15 Order Details Table Status Table**






Field Name	Type	Length	Allows Empty	Field Descriptions
id	Int	11	No	number
orderbasetable_id	Int	11	No	Order number
goodstable_id	Int	11	No	Commodity number
shoppingnum	Int	11	No	Shopping cart number

## 5. DESCHMANN INTELLIGENT DOOR LOCK SALES WEBSITE

### 5.1. REALIZATION OF EACH FUNCTION MODULE OF THE SYSTEM FOREGROUND






#### 5.1.1. FRONT PAGE PAGE

This is the main interface of the website, is also the interface of most products display, the purpose is to let the user in the first glance, can be attracted down, at least let it know this website, and the smart door lock this product, register as a user of the website. Overall, it is relatively brief, and the main functions are clear and easy to find.

Mall name	Table	Login	Details	Goods
<u>Deschmann Mall</u>	<u>Deschmann table</u>	<u>Deschmann register</u>	Order details	Commodity interface
				



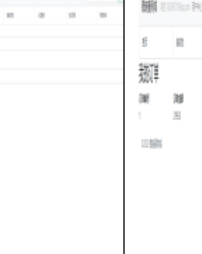


### 5.1.2. USER REGISTRATION PAGE

Visitors are not required to register when browsing this site, but when you need to place an order or add to a shopping cart and other operations have the desire to buy, then you need to register as a user of this site, submit some key information to continue the following operations.

Mall name	Table	Login	Details	Goods
<u>Deschmann Mall</u>	<u>Deschmann table</u>	<u>Deschmann register</u>	Order details	Commodity interface
				


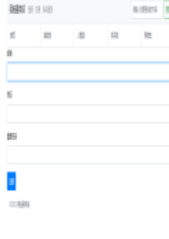
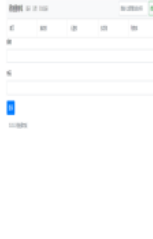


### 5.1.3. USER LOGIN PAGE

Easy login interface for our regular users

Mall name	Table	Login	Details	Goods
<u>Deschmann Mall</u>	<u>Deschmann table</u>	<u>Deschmann register</u>	Order details	Commodity interface
				

### 5.1.4. COMMODITY INTERFACE

The core function of the mall, the main interface can roughly understand the price of all products and product thumbnail display, click into the details of the mall page, which has further information display of goods.

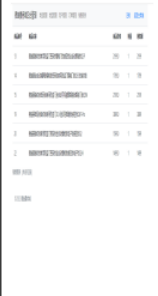
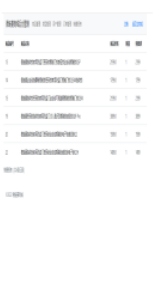



Mall name	Table	Login	Details	Goods
<u>Deschmann Mall</u>	<u>Deschmann table</u>	<u>Deschmann register</u>	Order details	Commodity interface
				

### 5.1.5. SHOPPING CART INTERFACE

The shopping cart module is mainly for users to select, see their favorite can temporarily add it to the shopping cart, in our shopping cart, will display the price for users to compare, adjust the number of purchases, delete products and other small functions.

### 5.1.6. ORDER VIEWING SCREEN

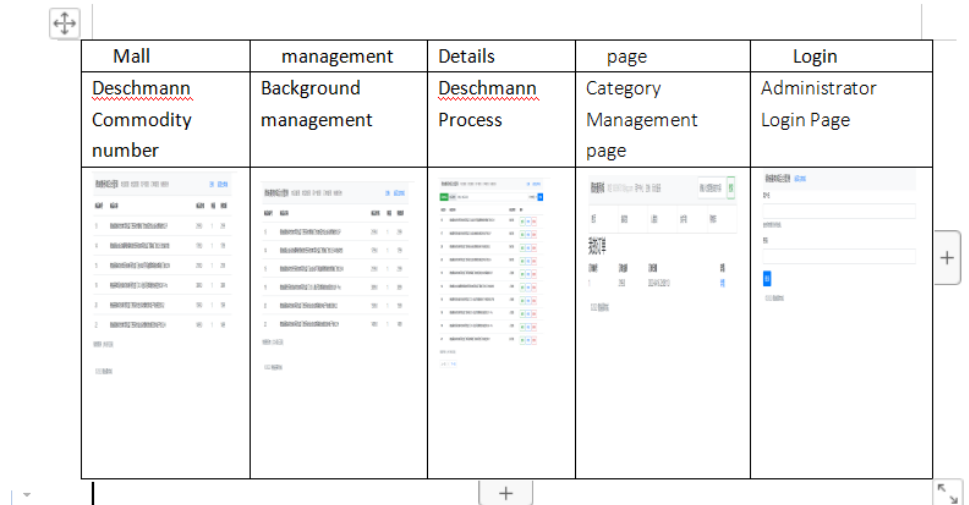
After the user places an order, an order is generated, which can be viewed here.

Mall	management	Details	page	Login
<u>Deschmann Commodity number</u>	<u>Background management</u>	<u>Deschmann Process</u>	Category Management page	Administrator Login Page
				

## 5.2. IMPLEMENTATION OF BACK-END FUNCTION MODULES

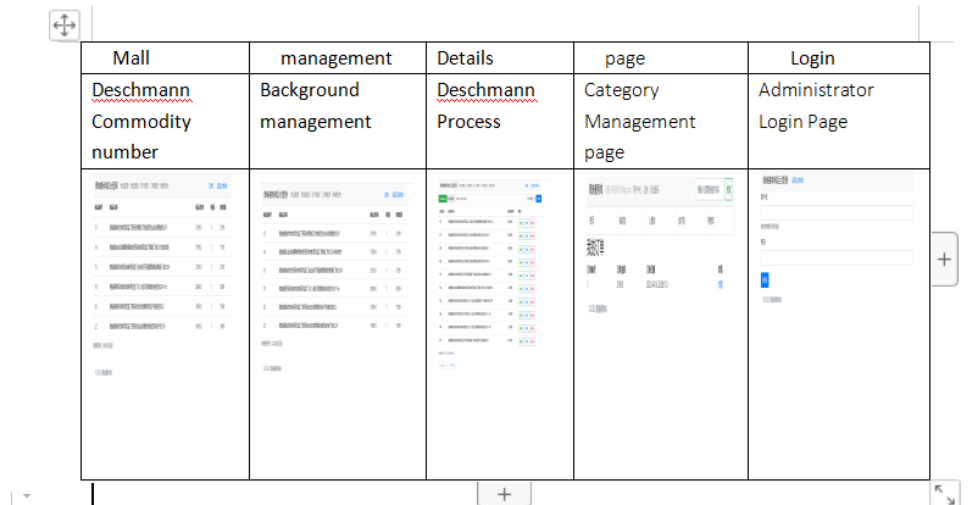
### 5.2.1. ADMINISTRATOR LOGIN PAGE

Background login interface, enter the correct administrator account and password to log in.



### 5.2.2. COMMODITY AND USER INFORMATION, ORDER MANAGEMENT INTERFACE

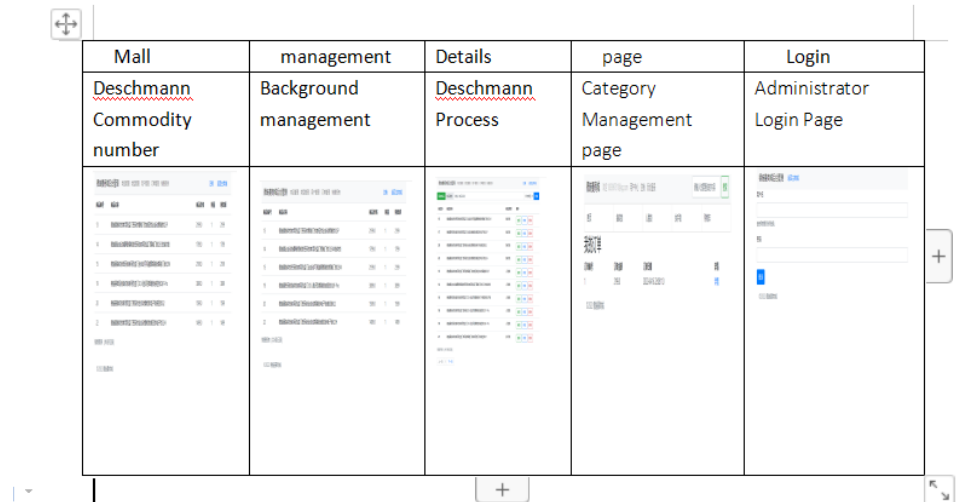
The core function module of the background is mainly used to add the goods inside the website and modify the basic information of the product in real time





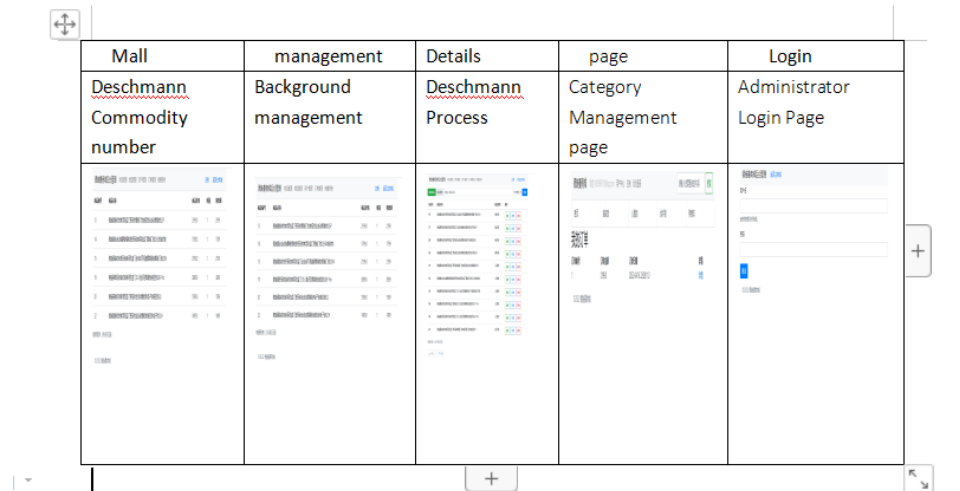
### 5.2.3. COMMODITY CATEGORY MANAGEMENT PAGE

Type management module can increase the product category.



### 5.2.4. SALES STATISTICS SCREEN

Sales report module, you can view the sales amount of the mall.



## 6. SUMMARY

After several months' efforts, the graduation design has come to the end, and the common functions are still perfect. From a white interface, now we can perfectly realize the display and purchase of goods, which is like the process of building a house on a deserted land. It is still a very satisfying thing. There is a fatigue and a self-regulating joy, overall is very fulfilling.

In the process of writing the graduation design, of course, it was not smooth sailing, because it was the first time for me to write code independently, many places were very unfamiliar, often encountered a busy and then did not have any changes, also could not find a clue. Self-study is really a very important quality that contemporary young people must have. CSDN platform is really a good open platform. There are many bigwigs in it and many people are suitable for it. No matter

how small or difficult your question is, you can find the answer you want in it, and the leaders are very considerate, not only explain the more believe, but also will paste the code for our reference. These months I often mixed in this platform, solved a lot of problems, but also a lot of things, whenever I can't find the Bug, is to find the predecessors in the forum post, and then study and try to solve their own difficulties. This may also be why, it is said that standing on the shoulders of giants, progress is often a lot of people with joint efforts, the former efforts to open up the wilderness, behind the people on the basis of higher and further direction. Only when we help each other, can we open a better situation.

In terms of the final result, the style of my overall website is a little reference to the simple style of Tmall platform, with white as the main color, the overall is relatively simple. After many tests, the site involved in the function can run perfectly, has achieved the desired effect. But I know that a good sales website must be more than that, their UI style may be more unique, beautiful. In terms of function, there may be more plate activities, better evaluation and other aspects, and the overall data will be more detailed. My Deschman intelligent door lock sales website and the market compared to the old e-commerce websites, there is still a long way to go, I will continue to learn and optimize, learn from predecessors, standing on the user side of thinking, to develop more attractive functions.

### **CONFLICT OF INTERESTS**

None.

### **ACKNOWLEDGMENTS**

None.

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