

基于 iOS 电商 App 的设计和实现

摘 要

随着经济和社会的发展，国内电子商务市场趋于成熟，伴随着近几年新零售概念的逐渐火热，电子商务和新零售的崛起能带动各个行业的发展，加速产业的升级。目前，国内 B2C 模式的电子商务规模较大的几个平台如京东、天猫、拼多多和苏宁易购，其各自的用户群体不同，各自的模式侧重点也略有区别，不管怎样，消费者需要诚信的商家、优质的商品、公道的价格和优质的售后服务，是一致的。

本文首先分析了潜在的用户特征、系统需求和业务需求，从而明确了产品应该有的特点和功能，同时分析了模块结构、关键技术和系统架构。

其次，使用 Texture 架构构建复杂页面的视图，在 Texture 框架中视图以 ASDisplayNode 代替 UIView，好处在于，Node 是线程安全的，Node 的创建、布局和渲染都是异步的，Node 采用 Flex 布局，完全摒弃了自动布局，开发者不需要手动进行高度计算，即使 Node 和 View 区别如此之大，但 Node 仍然还是和 View 兼容的。

然后，按照系统架构和功能模块的划分，基于 iOS 客户端的设计和实现，在页面设计上采用了 MVVM 架构对页面控制器、视图、数据模型和视图模型分层设计，完成了商品的展示、商品分类的展示、商品的购买、订单管理、注册和登录等功能，使用 HTTPS 协议实现客户端和服务端的数据交换，数据报文采用 JSON 格式。

最后，对系统的实现进行了开发阶段的自测和集成测试，集成测试完成了功能测试和性能测试，测试功能可用，流程无漏洞，系统稳定、可靠，能够满足实际需要。

关键词：电商，iOS，需求，Texture

ABSTRACT

With the development of economy and society, the domestic e-commerce market tends to mature, With the hotting of new retail concepts in recent years, the rise of E-commerce and new retail can drive the development of various industries and accelerate the upgrading of the industry. At present, several domestic B2C E-commerce platforms with relatively larger scale, such as JD, Tmall and PDD, they have different user groups, and their respective mode focuses are slightly different. In any case, the consumers in need for honest merchants, high-quality products, fair prices and high-quality after-sales service are consistent.

This article first analyzed the potential user characteristics, system requirements and business requirements, thus to clarify the features and functions that the product should have. Meanwhile, it analyzed the modular structure, key technologies and system architecture.

Secondly, use Texture to build complex page views. In the Texture, the UIView is replaced by ASDisplayNode. The advantage is that Node are thread-safe. The creation, layout and rendering of Node are asynchronous. Node adopt Flex layout, which completely abandoning the AutoLayout, the developers no need to do height calculations manually. Alought there huge difference between Node and View, Node is still compatible with View.

And then, according to the division of system architecture and functional modular, based on the design and implementation of the iOS App, In the page design, MVVM architecture is adopted to design the page Controller, View, Model and ViewModel hierarchically to complete the functions such as product display, product classified display, product purchase, order management, registration and login, use HTTPS protocol to realize data exchange between the client and server, and data messages are in JSON format.

Finally, the self-test and integration test in the development phase were carried out for the realization of the system. The integration test completed the functional test and performance test. The test function is usable, no bug during the process, the system is stable and reliable, and can meet actual needs.

Key Words: E-commerce, iOS, Requirements, Texture

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