Coupay System Design Document Series

Feasibility study report

1 Introduction

1.1 Writing purposes

Feasibility study was to study the problem, at minimal cost in the shortest possible time to determine whether the problem is solvable, after a detailed investigation of this project, initially prepared for system implementation reports, you will face problems in software development and solution for preliminary design and reasonable arrangement. Clear development risk and its economic benefits.

As a result of this report, software Manager review 。

1.2 Background

Software name: Coupay 。
Project sponsors: Citicorp software and technology services (China) co., Ltd.
Project developers: South China University of technology the rising sun Chang development group.
User: all consumers and businesses.
Software unit: South China University of technology
Projects with other software, the system:
This project uses the client / Principles of server, the client program is based on the Windows System to Eclipse for developing software applications, server-side windows Workstations for the operating system, is the use of MyEclipse and MySQL Database services for developing software programs.

1.3 Reference materials

轻量级Java_EE企业应用实战_Struts_2+Spring_3+Hibernate整合开发_第3版
Android开发权威指南（sdk2.3）

2 Feasibility study on the premise

2.1 Request

Features: solve the payment problem, optimizing the application of funds and share shopping, optimize the collection, maintain a steady passenger flow, get timely feedback.

Properties: accounts receivable, payment information must be timely, flawless is stored on the server, the data on the server must be refreshed in a timely manner.
Output requirements: data integrity, and informative.
Output requirements: simple, fast, real time.
Security and confidentiality requirements: server administrators have permission to regulate trade, regular users can only manipulate personal information and transactions.
Deadlines: 3 Three months.

2.2 Target

Once the system is implemented Settlement carrying cash inconvenience, and AA system paid change and modern multiple cards,coupons and neglects management, paid problem, to on membership card, and offers coupons, offers information provides integration management and reached automation using of effect, while into community, breakthrough spatio-temporal boundaries to convenient share consumption experience while uses positioning features provides kind of around consumption information recommended, thereby for user created "save money worry, Le enjoy new life" of experience, Also provides online communications platform for online merchants to promote consumption, achieve win-win.

2.3 Conditions, assumptions and limitations

Recommended software for life: 5 Year.
Sources of funding: Citicorp software and technology services (China) co., Ltd.
Hardware: servers : MySQL
Terminal for andorid System mobile phones or tablet computers .
Operating environment: windows
Database: MySQL

2.4 Method of conducting a feasibility study

When the user makes a transaction, the information through a client transaction (money, merchandise information, trading objects, and so on) entered into the system, the system checks. In addition administrators can monitor each transaction at any time, require a periodic query statistics, so that appropriate adjustments.

Analysis in system function to consider the legality of the documents verified (such as banking card, a business licence).

This system should also add features:

Passengers delayed the transaction payment processing

After the transaction is cancelled

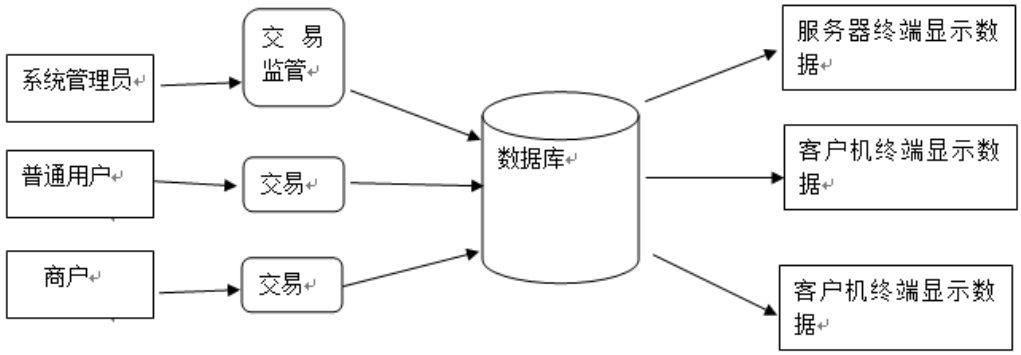
Users to temporarily change the processing of transactions

System of external input include at least: amount, transactions object

3 Analysis of the existing system

Current social payments system is mainly dominated by artificial systems, Payment problems tend to concentrate on carrying cash in inconvenience,AA business cover the change inconvenient when there are many membership cards and coupons but neglect due to time and energy issues, we discovered through data collection, today QR codes and NFC mobile payment technology is relatively mature, is the future trend.

3.1 Processes and data flow



3.2 Fees and expenses

Cost and expense					
	The first year	The second year	The third year	IV year	V year
The cost of doing business					
Technical team salary	288,000	432,000	576,000	720,000	10.8 million
Welfare payments	48,000	60,000	96,000	120,000	180,000
Fixed asset depreciation	17,733	17,733	78,533	60,800	60,800
Server rental	427,800	855,600	1.426 million	2.139 million	2.852 million
Web site construction	5,000	6,000	8,000	10,000	150,000
Developer certification	868	0	0	0	0
Subtotal	787,401	1,371,333	2,184,533	3.0498 million	14.0428 million
Management fee					
Management salaries	The 144,000	216,000	288,000	360,000	540,000
Benefit costs	12,000	15,000	24,000	30,000	45,000
Housing rentals	72,000	72,000	243,600	243,600	243,600
Fixed asset depreciation	4,116	4,116	4,116	0	0
Low-value consumables	1000	1500	2000	3,000	4,000

Network costs	1600	1600	3, 200	3, 200	3, 200
Start-up costs	5, 300				
Subtotal	240, 016	310, 216	564, 916	639, 800	835, 800
Cost of sales					
Sales salaries	The 144, 000	216, 000	288, 000	360, 000	5.4 million
Benefit costs	12, 000	15, 000	24, 000	30, 000	45, 000
Advertising costs	200, 000	500, 000	800, 000	1 million	1.6 million
Fixed asset depreciation	4, 116	4, 116	4, 116	0	0
Low-value consumables	1000	1500	2000	3, 000	4, 000
Travel	3, 000	4, 000	5, 000	8, 000	10, 000
Subtotal	The 364, 116	The 740, 616	The 1, 123, 116	1.401 million	7.059 million
Finance charges					
Interest expense	12, 800	12, 800	12, 800	12, 800	12, 800
Subtotal	12, 800	12, 800	12, 800	12, 800	12, 800
Total	The 1, 404, 333	The 2, 434, 965	The 3, 885, 365	5.1034 million	21.9504 million

3.3 Staff

The project team consists of 11 mostly from South China University of technology school of software, College of economy and trade, as well as made up of central China Normal University students of the English Department. Project team members in both social and academic research development, have good teamwork skills, product research and development capabilities and operation of the project. Product research and development and operations software Academy members primarily responsible for marketing and financial management major from College of economy and trade and the Member in charge of the English Department.

3.4 Equipment

PC
With NFC capabilities for smartphones
For short-range wireless communication point of sale POS machine

3.5 Limitations

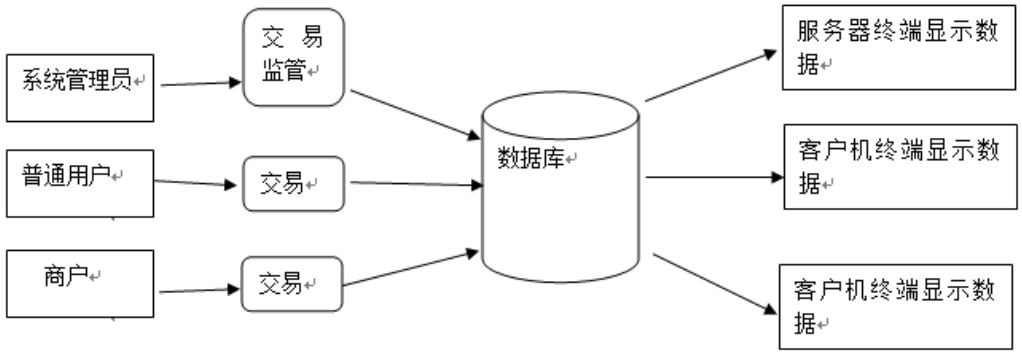
The system belongs to the smart system, consumer bias towards young people, older persons may be an inconvenience. And this is not to improve on the system can solve the problem.

4 The proposed system

4.1 Description of the proposed system

This system By using the QR code on the one hand, and NFC technology offers solution to carry cash, withoutAA payment system change and modern duokaduo coupon and pay issues such as neglect mobile wallet service for the purpose, to the membership card, coupons and other special offers to provide integrated management and automation using the results, at the same time as members of the community, Breakthrough in temporal and spatial boundaries to facilitate sharing of experiences and use the location feature to provide the kind of perimeter to consume information recommendation, so as to create "rushed out to save money, and enjoy a new life" experience, on the other hand also provides online merchants with online communications platform to promote consumption and achieve win-win.

4.2 Processes and data flow



4.3Improvements have been made

The current system is artificial, so efficiency is relatively low, compared to systems, the system developed by our team efficiency is much higher, and you can solve Cash, withoutAApayment system change and modern duokaduo coupon and pay issues such as neglect.

4.4 Impact

4.4.1 Effect on equipment

Equipment required to meet the following requirements:
NFC Of a smart phone
Achieve sales of short-range wireless communication terminal POS

4.4.2 Impact on software

Existing software have no conflicts, are good to use operating system compatibility and stability.

4.4.3 Organization of impact on users

First need to familiarize yourself with the system for a short time, but does not require extensive training.

4.4.4 Impact on system operation

When the system is put into use needs a short period of time to become familiar with, and does not require extensive training.
Source data you need to enter the system, for unified management.
Data into the system can be automatically imported.
System functions can be provided to store your data, backup and restore.
Data can be exported, the administrator can be processed according to the situation.
System can back up the database at any time, the user can choose if you want the backup time

4.4.5 Impact on the development of

In order to support the development of the proposed system, the user must provide the corresponding merchant information.
The data required in order to establish a database of resources, general user information, merchant information, information on the location.
Computer software installation My SQL， MyEclipse

4.4.6 Impact on the locations and facilities

Need access networks for computer display environment.

4.4.7 On financial implications

With funding from the company.

4.5 Limitations

The system belongs to the smart system, consumer bias towards young people, older persons may be an inconvenience. And this is not to improve on the system can solve the problem.

4.6 Technical requirements for viability

a. Under the current restrictions, the system's functionality objectives can be achieved;
b. Using existing technology, the system can successfully;
c. Quantity and quality to meet the requirements for developers;
d. Within the prescribed time limit, system development can finish.

5 Choices of system solutions

No

6 Analysis on investment and benefits

6.1 Expenditure

Cost calculating

Cost and expense					
	The first year	The second year	The third year	IV year	V year
The cost of doing business					
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6.2 Benefits

Revenue forecasting

	The first year	The second year	The third year	IV year	V year
Business projects	The total amount	The total amount	The total amount	The total amount	The total amount
Advertising	200,000	500,000	2.5 million	5 million	9 million
Trading commissions	950,000	2.03 million	4.62 million	10.4 million	23.64 million
Service revenue	0	0	5,000	25,000	100,000
Total	1.15 million	2.53 million	7.125 million	15.425 million	32.74 million

6.3 Income/investment

To derive income/investment ratio for the entire system life cycle.

（ 1150000+2530000+7125000+15425000+32740000 ）
/（ 1404333+2434965+3885365+5103400+21950400 ） =1.6956

6.4 Payback period

2530000〉 2434965 Payback period is two years

6.5 Sensitivity analysis

Designing systems for a period of five years ,estimated that within a maximum of 10 years
Processing speed: general query speed < 4 seconds
Key data query speeds: <2 seconds

7 The feasibility of social factors

7.1 Legal feasibility

This system is developed on its own, there is no infringement, please feel free to try.
All software is to use legal copies.
All technical data are kept by proponents.
Contract set for determining liability for breach of

7.2 The feasibility of using

Just keep a NFC of a smart phone you can use the system, and the average user does not require training. Managers is subject to General training, trained staff will be familiar with the software

8 Conclusion

Because of the effectiveness of investment is far greater than 100%, technical feasibility, economics, operations, can be developed . This system can be implemented immediately, and finished as possible. From human resource optimization point of view, can take full advantage of the development team on human resources. Can start immediately.