



E-Commerce Gateway

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Abstract: Nowadays, E-Commerce is in strong trend and its all business is on Internet i.e., websites. There is one disadvantage of this, that it is completely dependent on Internet. So our motivation is to reduce the dependency of these E-Commerce businesses for its customers from the Internet. This project aims at creating a E-Commerce Gateway for an organization. This allows users to access the products offline available on the E-Commerce site. Instead of depending on internet and smartphones users can acquire the product information just by sending a text message related to the product the user wants information about. This info will remain with user until he deletes it and will get info about desired product.

Keywords: Data Communication, Global System for Mobile, Smartphones, Electronic Data, Electronic Communication.

I. INTRODUCTION

What The Gateway is called as Trusted Third Party or Entry point to any network. Use in E-commerce system for more secure transaction. Online shopping allows customers to sit in their homes and buy goods from all over the world. Similarly allow Merchant to sell their products to all over the world from home. Most of the population will use online payment in near future. Most of the Third world countries lagged behind in making a good Internet architecture. There is need of a secure online payment gateway in developing countries. On the basis of proposed architecture of e-payment system of third world countries, this paper gives a brief overview of existing electronic payment gateway. It also mentioned the requirement for an electronic payment gateway from customer and merchant's point of view. And on the basis of these facts and figures a new secure e-payment gateway has been designed and developed. The payment gateway would provide secure transactions. On the basis of proposed architecture of epayment system of third world countries and the requirements related to any electronic payment gateway, we design and develop a Secure, reliable and efficient electronic payment gateway. In USA about \$3.5 trillion pours daily through three major payment networks that dwarf the Bank of New York's. The networks, run by banks and the government over high-speed phone lines, converge at just 10 secret data processing centres nationwide. They transmit everything from direct-deposit pay checks to utility bill payments to huge corporate transfers in the USA and abroad. PayPal in the US, which was recently purchased by EBay, is one of the most frequently used e-payment gateway. In China payment gateway is the single biggest unmet demand because of lack of trusted and secure mechanism. Turkey's payment gateway is difficult to use insecure and highly expensive. In Nepal there are around 3three banks that are offering Internet Banking Services and majority of middle class are out of such services.

This project aims at creating an E-Commerce portal for an organization. This allows users to access the products offline available on the E-Commerce site. The main objective of this system is to connect people to the E-Commerce service without internet, to reduce the dependency of smartphones.

II. RELATED WORK

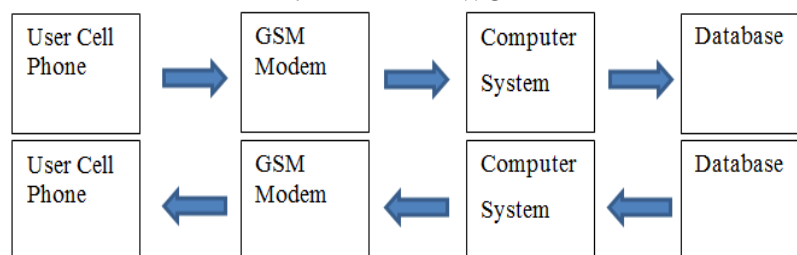


Fig 1. Proposed system flow

The above picture shows the flow of the proposed system:

1. The user will send an SMS of the desired company or the sub product of the respective company.
2. The SMS of the user will be intercepted by GSM modem and the SMS will then be extracted by the application software

3. The application software will then compare the SMS in the database using binary search algorithm.
4. The respective data will then be extracted from the database and sent back to GSM modem.
5. The GSM modem will then send the respective data back to the user.

III. LITERATURE SURVEY

The cutting edge for business today is e-commerce. E-Commerce stands for electronic commerce. It means dealing in goods and services through the electronic media and internet. On the internet, it relates to a website of the vendor, who sells products or services directly to the customer from the portal using a digital shopping cart or digital shopping basket system and allows payment through credit card, debit card or EFT (Electronic fund transfer) payments. E-commerce or E-business involves carrying on a business with the

Help of the internet and by using the information technology like Electronic Data.

E-Commerce is the movement of business onto the World Wide Web. E-Commerce has almost overnight become the dominant online activity. There is no single definition of E-Commerce, it means only commercial activity, which is performed or linked to or supported by Electronic Communication. The effects of e-commerce are already appearing in all areas of business, from customer service to new product design. It facilitates new types of information based business processes for reaching and interacting

With customers like online advertising and marketing, online order taking and online customer service. In now days E-commerce uses the WWW at least some

Point in transaction lifecycle. It can also reduce costs in managing orders and interacting with a wide range of suppliers and trading partners, areas that typically add significant overheads to the cost of products and services.

There has been a rise in the number of companies' taking up e-commerce in the recent past many sites are now selling a diverse range of products and services from flowers, greeting cards, and movie tickets to groceries, electronic gadgets, and computers.

IV. PROPOSED SYSTEM

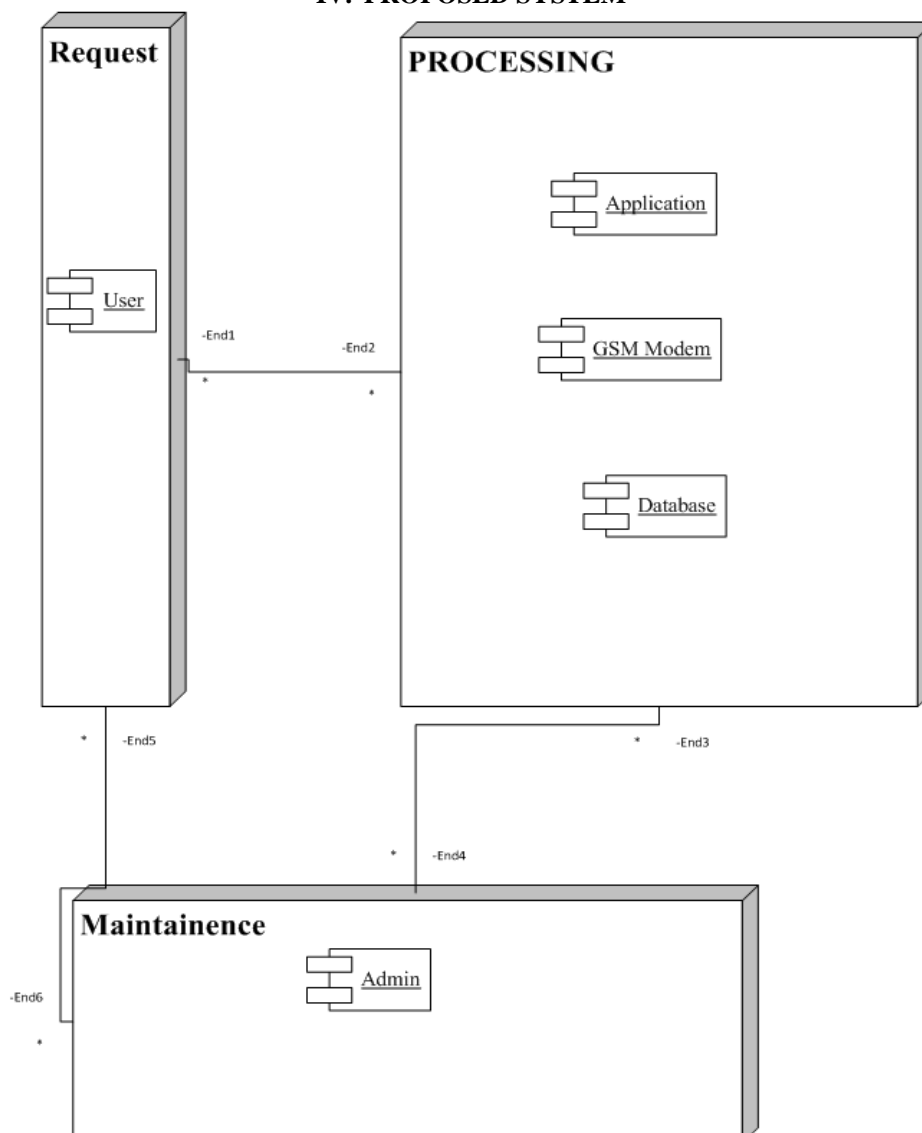


Fig 2 system architecture

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This application uses the data stored in the central database on the server. It can use MS-Access, MYSQL, etc. to store the database. Database can be installed virtually on web server in the organization.

MTHEMATICAL MODEL:

Let S be the universal set

$$S = \{I, F, O, D\}$$

Where,

- I is input
- F is function
- O is output
- D is database

$$I = \{UR, VI, VR\}$$

Where,

- UR is user request
- VI is valid information
- VR is valid response

$$UR = VI \ \&\& \ VI \in D$$

$$UR = \{UR1, UR2, \dots, URn\}$$

$$VI = \{VI1, VI2, \dots, VIn\}$$

$$VR = \{VR1, VR2, \dots, VRn\}$$

$$\text{Function} = \{DA, DVS, RID, IS\}$$

Where,

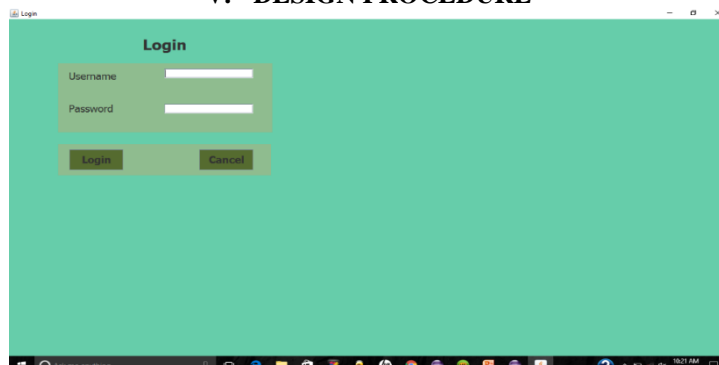
- DA is data access
- DA = VR -> VI && VR ∈ DB
- DVS is detect valid syntax
- DVS = (VI == VR)
- RID is retrieved into database
- RID = VR ∈ DB
- IS is invalid syntax
- IS = VI ≠ VR ∈ DB

$$\text{Output} = \{S, F\}$$

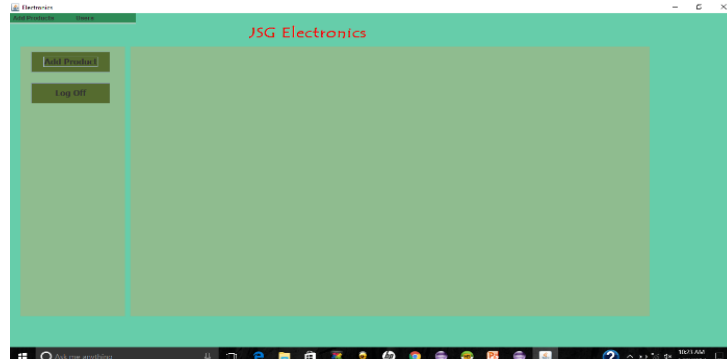
Where,

- S is Success
- F is Failure
- S = {O}
- S = UR -> VI -> VR ∈ DB
- O = {PD, PC}
- PD is product description
- PC is product category
- F = {F1, F2}
- UR ≠ VI -> F1
- F2 = {Φ}

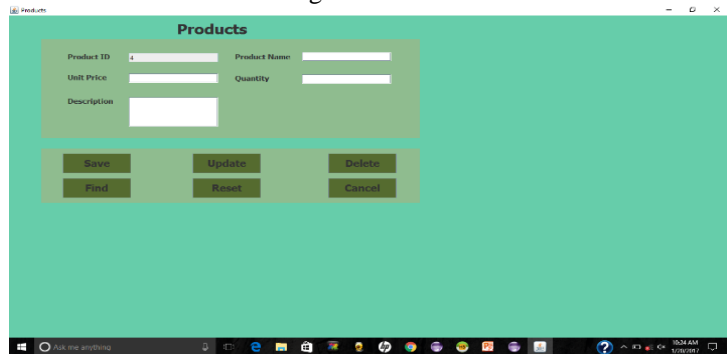
V. DESIGN PROCEDURE



1. This is the main login forum
2. Here system admin needs to provide valid credentials in order to login



1. After login into the application this forum comes up
2. Add product option redirects to the products forum
3. The log off option will redirect admin to the login forum

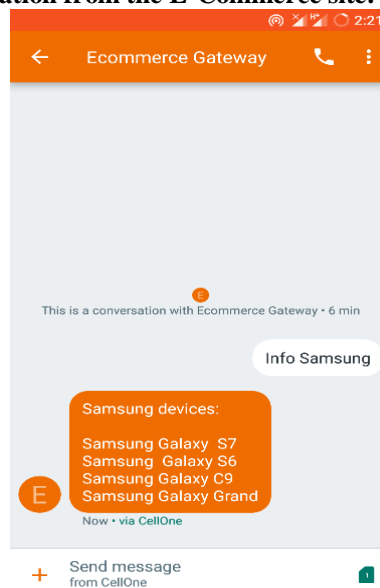


1. The products forum shows the product id, price, quantity, name, description, etc.
2. The save option saves the currently edited product information into the database.
3. Update option helps in updating the database in order to improve searches
4. Delete option deletes the respective product list from the database
5. Find searches fields in database
6. Reset clears the forum
7. Cancel redirects the forum back to the main forum

VI. IMPLEMENTATION

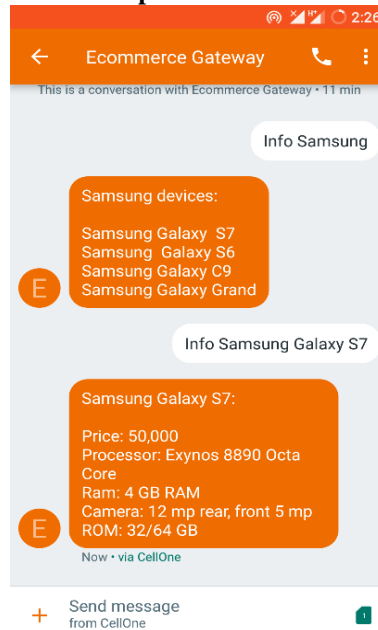
Our Proposed system is basically divided into two types at the **customer end**:

1. **The customer retrieving the information from the E-Commerce site:**



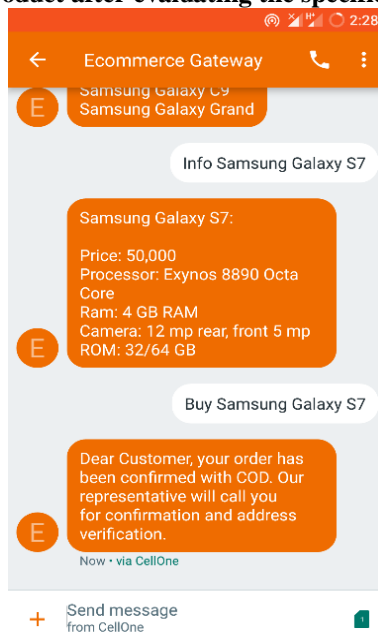
In the above picture the customer can send a SMS of the desired company without internet and receive the list of the products available of respective company.

2. The customer retrieving the information of sub products of the desired company:



In the above picture the customer can select the sub products from the previous message of the the desired company products and can request for the specifications of the desired sub product of the respective company.

3. The customer buying the desired product after evaluating the specifications received in previous phase:



In the above picture the customer then can buy the desired product and then he will get the confirmation from the admin side and then customer will have to verify his address on phone call.

VII. CONCLUSION

In Today's world combination of Internet and Smartphones is popular, but each and every person cannot afford these facilities. This project allows users to get the service with and without Smartphones and Internet. The project provides service through SMS to acquire the requested data. Also the soft copy of data will always remain in the user's inbox until the user deletes

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