



## A Two Tier E-Commerce Platform for Rent Product Service

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### ABSTRACT

In day to day life we need many things which we cannot afford to purchase on the regular basis so their should be some platform to get those things on the rent and the service such as AMC on the website platform. E-commerce is essentially a way of exchanging services and product(On chargeable basis) between the consumer and the company through the Internet. To Provide an interface between vendors and user. A rental service is a service in which costumer gives request for a service. It is more convenient and beneficial than carrying and maintaining the unit. To provide service facility to users using our application. Our system will be working for business to customer and vendor to customer. We are developing an application which will provide a platform for customer for purchasing and selling products. We will also add feature which will also provide platform to buy tools and devices on RENT. Apart from this we will also allow small level service provider to provide their service to global market.

**Key Words:** E-Commerce, rent product, bidding

### 1. INTRODUCTION

This chapter describes the term E-Commerce and introduces the concept of rent product and service. It also gives the overview of the E-Commerce Framework which describes the deliverables of the project.

#### 1.1 Overview

E-commerce is essentially a way of exchanging services and product between the consumer and the vendor company through the Internet. To provide an interface between vendors and customers. We proposed a System which will allow vendor to provide services for product, and also to provide things on Rent which are not been purchased by any person in day to day life. Our System will also provide an bidding facility both for vendor and also

for user. Small scale level service facility will be provided to the user such as plumbing, beautician, etc. It is more convenient and beneficial than carrying the cost of owning and maintaining the unit with competitive analysis significantly extends existing techniques by handling both buyers and sellers, each of which occupies the service chain or renting a limited products. More and more enterprises and businesses are resorting to VNFs for provisioning network services. Accompanying this trend, an NFV market is emerging, where dedicated NFV service providers create VNF instances, build VNF service chains, and offer them to customers on demand, eliminating the need to build and maintain these functions at customer premises. The service chains are assembled using resources (computing and bandwidth) that an NFV provider owns or rents from other resource suppliers (e.g.cloud providers). Customers can browse the VNFs available at an NFV provider, and specify the VNFs to compose their service chains. There are yet many open issues to resolve in order to enable an efficient NFV market, among which resource allocation optimization and pricing are the top priorities. Efficient service chain provisioning and pricing mechanisms are still missing. We study an NFV market where the NFV provider owns a geo-distributed pool of resources, allocates resources to assemble service chains upon demand, and may purchase extra resources from resource suppliers if deemed appropriate. The customers bid for service chains they need while the resource suppliers sell their available resources to the NFV provider through sell bids. We seek an efficient online auction mechanism for the NFV provider to carry out dynamic service chain provisioning and pricing on the go. The design objective is to maximize the social welfare of all parties in the entire system lifespan, while guaranteeing truthfulness in bidding, individual rationality and polynomial time for online

computation. Instead of resorting to a double auction, we novelly design the online auction such that both buy and sell bids can be similarly handled in a consistent fashion. First, we characterize the interaction among the NFV provider, VNF service chain customers, and resource suppliers in an online auction model and design an efficient online mechanism to tackle the key issues of resource provisioning and pricing among the three parties. Such a practical three-party NFV market paradigm is new in the literature. Our auction guarantees truthfulness of both buyers and sellers, and obtains near-optimal expected social welfare with a competitive ratio of  $1:0(-)$  where  $-$  can be arbitrarily close to 0. The key design technique to achieve near-optimality is to convert the social welfare maximization problem in the online stochastic model to a deterministic fractional auxiliary program, exploiting the properties of the bid arrival process and associating arbitrary realization probabilities with all types of bidding languages under the i.i.d. bid type model. The fractional program provides an upper-bound of the offline optimal social welfare in expectation, and facilitates our online algorithm design based on a primal-dual framework, by removing the time dimension indices of the dual prices.

## 2. Literature Survey

In this chapter we will see the various studies and research conducted in order to identify the current scenarios and trends in E-Commerce. Early efforts on NFV focused on bridging the performance gap between specialized hardware and virtualized network functions running on VMs, as well as designing management platforms for VNF deployment, traffic steering, and flow state migration across multiple instances of a VNF. These systems significantly facilitate the dynamic deployment and scaling of VNFs. A few recent studies investigate optimal placement and scaling of VNF instances and traffic routing in service chains for cost minimization. VNF-P presents a one-time optimization model for VNF placement, considering hybrid deployment where part of the network service is provided by dedicated hardware and part by VNF instances, and designs a heuristic algorithm. Mehraghdam et al. model a mixed integer quadratically constrained program (MIQCP) to pursue different optimization goals in VNF placement, without giving solution algorithms.[9] These work mostly deal with one-off placement of the NFV service chains, ignoring the dynamic nature of an

NFV system. Resource allocation in computing and communication systems is a classic problem that has been extensively studied, including from a game theoretical view by analyzing the incentive compatibility of the allocation algorithm.[5]

### 2.1 Rentomojo

Why renting, you ask? Well, because we understand that unnecessary furniture and appliance costs aren't the best investment options. So we decided to come up with an easier solution instead. We provide more than online rental services, we help you explore a world of possibilities. With our assured quality and prompt services, you can say goodbye to all the hassles that come with buying and say hello to convenience.

### 2.2 Urban Clap

UrbanClap is recognized as the fastest-growing startup in India. We are a mobile marketplace for local services. We help customers hire trusted professionals for all their service needs. We are staffed with young, passionate people working tirelessly to make a difference in the lives of people by catering to their service needs at their doorsteps. We provide housekeeping services which consist of Plumbers, Electricians, Carpenters, Cleaning and Pest Control. We also provide personal services like beauty, spa, mobile and other appliance repairs etc. Be it getting a plumbing job done, improving your fitness through yoga, learning to play the guitar, decorating your home or getting candid photos of your wedding clicked, we are a sure shot destination for your service needs.

## 3. Problem Definition

In day to day life there are various basic things or device which we need on rental basis which an individual can't afford to buy or is not worth purchasing. We have some rental service provider but they are only for the limited products. Like this there are many problems a customer can face in his daily routine, hence we need a strong platform to overcome such problems faced by an individual!

### 3.1 Need of E-Commerce

E-commerce is essentially a way of exchanging services and product (On chargeable basis) between the consumer and the company through the Internet.

To Provide an interface between vendors and user. A rental service is a service in which customer gives request for a service.

It is more convenient and beneficial than carrying and maintaining the unit. Our system will be working for business to customer and vendor to customer.

### 3.2 Basic Concept

1. Collect customer data for email marketing.
2. Reach new prospective customer through engine.
3. Increase visibility of shop promotion.
4. Allow customer to shop; where, how and what they want.

Hence we are developing an application which will act as a bridge between vendor and customer for purchasing and selling products. We will also add feature which will also provide platform to buy tools and devices on Rent. Also it will provide various services which an individual need to survive in a locality.

### 4. System Design

System design is the process of defining the components, modules, interfaces, and data for a system to satisfy specified requirements. System development is the process of creating or altering systems, along with the processes, practices, models, and methodologies used to develop them.

#### 4.1 Data Flow Diagram

Data flow diagrams are also known as bubble charts. DFD is a designing tool used in the top-down approach to Systems Design. This context-level DFD 0 is next exploded, to produce a Level 1 DFD that shows some of the detail of the system being modeled. The Level 1 DFD shows how the system is divided into sub-systems (processes), each of which deals with one or more of the data flows to or from an external agent, and which together provide all of the functionality of the system as a whole. It also identifies internal data stores that must be present in order for the system to do its job, and shows the flow of data between the various parts of the system.

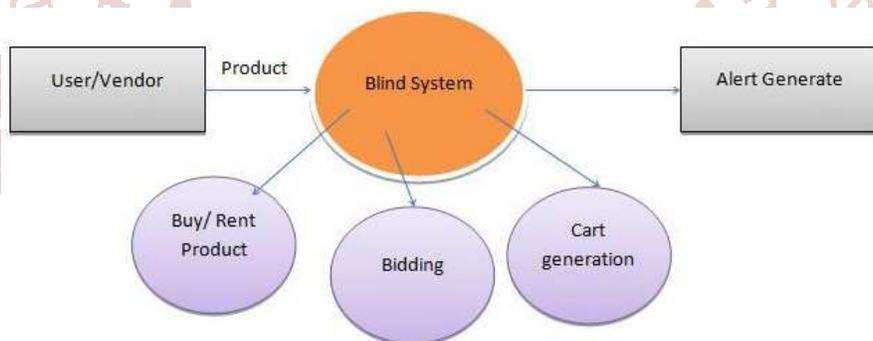
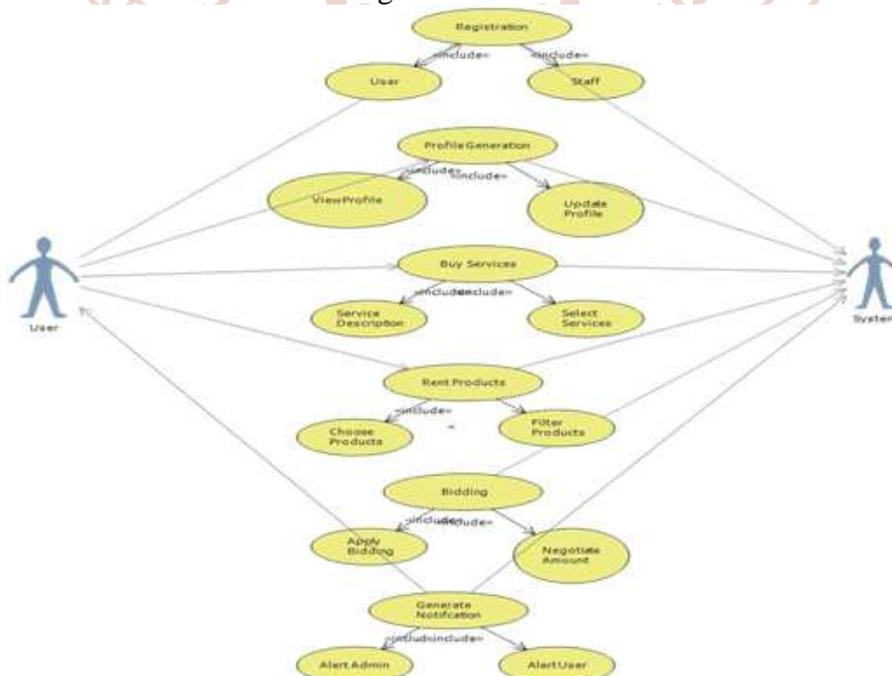


Figure 1: DFD1



## Conclusion

Taking into consideration of the problems faced by the individual he/she can't afford to buy the things hence we are going to provide a mechanism which will allow the user to rent thing or tool on our portal as well as the vendor will be able to list his things on the same. Also one could get the AMC service provider on our platform. In this project we are going to propose a system which will allow the user to rent the products which a individual cant afford to buy the various household tools and things. Also it is going to make various AMC service available to the customer through our platform. We are developing a system which will provide a platform for user to purchase things such as tool and devices on rent which are not been purchased easily for normal people. We will design a system with competitive analysis significantly extends existing techniques by handling both buyers and sellers, each of which occupies the service chain or supplies resources of a limited stock.

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