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# Cloud Based E-Rent System

Ms. P. K. Karmore<sup>1</sup>, Ms. S. A. Sahare<sup>2</sup>, Ms. N. D. Sonwane<sup>3</sup>, Ms. S. R. Kapse<sup>4</sup>, Ms. S. S. Thombre<sup>5</sup>

<sup>1,2,3</sup> CSE Dept, DBACER, Nagpur, Maharashtra, India

<sup>4,5</sup> CT Dept, YCCE, Nagpur, Maharashtra, India

**Abstract :** *Online reservations give many benefits to users. Rental system also known as hiring, is an agreement where a payment is made for the temporary use of a goods owned by another. It is more convenient and beneficial than paying the cost of owning and maintaining the goods. The number of agencies or companies provides their products or items to the customers on rent for specified period of time. If it is required then can be extended by the rental shopee. It was so difficult to search the rental shop to get the required thing on rent basis when renting system was manual. It was also not necessary that needed things were also available for every customer. To solve this problems, we are designing a system in which all needed things which the user or customer cannot purchase, will be made online and on lease basis. This system is called as online rental system. The rental system primarily serves people who needs product for temporary use.*

**Keywords :** *Rental system, goods, hiring.*

## I. INTRODUCTION

Now days, people are using internet as one of the basic need. Online is the new big thing. Everything from a small pin to large home furnishings item is available online for the transaction. People can buy everything they want easily. Buying things online is beneficial in so many ways. First of all it saves time, it is convenient. Shopping online gives you freedom to shop from anywhere throughout the country. All the brands are available, no location barriers, various options. The main idea for this paper is to give such a platform for the vendor where they can put up their shops and deal with customers according to themselves. The idea of Cloud Computing simplifies many network connections and computer systems involved in online services. Users with an Internet connection can access the cloud and the services it provides Cloud Computing includes :

- Online backup,
- Social services,
- Personal data services,
- Online applications,
- Hardware services

### A. Cloud Computing

Cloud computing is a type of Internet-based computing that provides shared computer processing resources and data to computers and other devices on demand. It is a model for enabling ubiquitous, on-demand access to a shared pool of configurable computing resources (e.g., computer networks, servers, storage, applications and services), which can be rapidly provisioned and released with minimal management effort. Cloud computing and storage solutions provide users and enterprises with various capabilities to store and process their data in either privately owned, or third-party data centers that may be located far from the user—ranging in distance from across a city to across the world. Cloud computing relies on sharing of resources to achieve coherence and economy of scale, similar to a utility over an electricity network. Cloud computing is a recently evolved Computing terminology based on utility and consumption of computing resources. Cloud computing is the delivery of computing services over the internet. Cloud services allow both individual and businesses to use software and hardware managed by third party which are present at remote location. The cloud computing allows accessing to information and computer resources from any remote location where network connection is available. Cloud can be private, public or hybrid.

A private cloud is a virtual data centre that operates with in a firewall. Private clouds are highly conceptualized, joined together by large number of IT infrastructure into resource pools and privately owned and managed. A public cloud is cloud model in which services, like application and data storage are generally used over the internet. Public cloud services has pay-per-usage mode, typically by the minute or the hour. Leading public cloud provider include Amazon Web Services (AWS), Microsoft azure, IBM/Soft Layer and Google compute engine. Hybrid cloud is a combination of public cloud services and private cloud. The aim of hybrid cloud is to create a single, automated, scalable environment which can take all the advantages of a public cloud infrastructure

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provides.

The cloud services models are Software as a Service (SaaS), Platform as a Service (Paas) And Infrastructure as a Service (IaaS). In Software as a Service mode, a pre-made application, along with any required hardware, software, network and operating system are provide. In PaaS model the customer are provided with an operating system, network and hardware and they install or develop their own applications. The IaaS model just provide network and hardware and the customer installs or develops its own operating system, applications and software. The idea of Cloud Computing simplifies many network connections and computer systems involved in online services. Users with an Internet connection can access the cloud and the services it provides Cloud Computing includes online backup, social services, personal data services, online applications, hardware services, mirrored websites. In this paper cloud is used to store data which is used for rent.

### *B. Rental System*

A rental system is the system that rents assets for required period of time, generally renting from few hours to few weeks and primarily located busy city areas and often complimented by a website allowing online services. Rental system is where a fixed number of heterogeneous users rent one product at a time from a collection of reusable products. A rental durations of each user are independent and identically distributed with finite mean. The study of transient behaviour in this system following the introduction of a new product that is desired by all the users. They represent the usage process for the new product in terms of an empirical distribution [1]. The main idea is to give such a platform for the vendor where they can put up their shops and deal with customers according to themselves. The website or the framework provider will act just as a platform for customers to act with the shopkeepers [2]. Understanding shifts in consumer behaviour gives insights into the demands of the market. Knowing these things enables marketers to drop certain products or make strategic changes in pricing that will result in big gains or, at the very least, limit damage to profits [3].

There are many possible reasons for renting instead of buying:

- 1) In many jurisdictions rent used in a trade or business is tax deductible, whereas rent on a dwelling is not tax deductible in most jurisdictions.
- 2) Financial inadequacy, such as renting a house when one is unable to buy it. One may not wish to pay the full price that ownership would need, allowing for smaller payments over a specified period of time.
- 3) Reducing financial risk due to depreciation and transaction costs, which might be needed only for a short amount of time.
- 4)
- 5) When something is needed that may or may not be already owned but is not in proximity for use, such as renting an automobile or bicycle when away on a trip.
- 6) Needing a cheaper alternative to buying, such as renting a movie: a person is unwilling to pay the full price for a movie, so they rent it for a lesser price, but give up the chance to view it again later.
- 7) Renting is good for the environment if products are used more efficiently by maximizing utility rather than being disposed , overproduced and underutilized.

## II. METHODOLOGY USED

Sales Force technology has been used for implementation. Following facilities are provided by Sales Force technology:

- A. Customer service software and support
- B. CRM and cloud computing to grow our business
- C. Help Desk Software, Customer service for Small enterprises
- D. Maintenance Free
- E. Access Anywhere
- F. Better Security
- G. Fast Implementation

Implementation is divided into three modules. First module is registration form in which the user will register. The second module is admin side product registration. The third module is cart management.

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### III. RESULTS AND DISCUSSION

#### A. Customer Registration Form

Customer fills their details in registration form. The details like full name, email id, contact number, address with pin code, id-proof, etc. The First step in the system is to register the user. After registration process the user can login into the system and can use it.

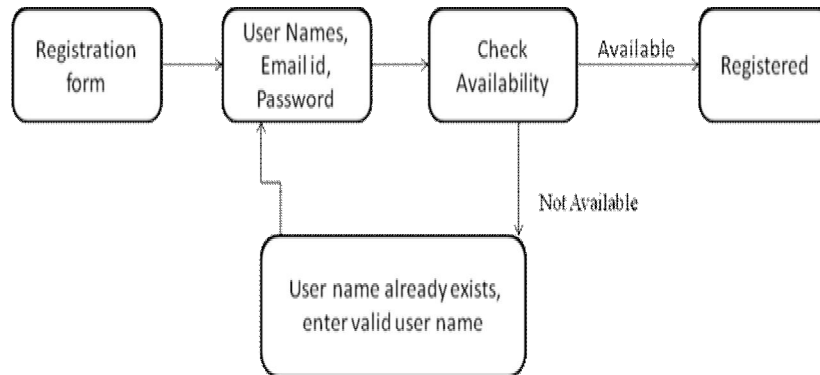


Figure 1: Registration Process

The screenshot shows the 'ONLINE RENTAL SYSTEM' header. Below it is a 'Login' section. The 'Enter Your Details' area contains input fields for 'Username' and 'Password', with a 'Login' button. A link for 'New User Click Here!' is at the bottom left. A legend indicates that a red vertical bar next to a field name signifies 'Required Information'.

Figure 2: Customer Login

The screenshot shows the 'ONLINE RENTAL SYSTEM' header. Below it is a 'User Registration' section. The 'Enter Your Details' area contains input fields for 'Username' (Rajni Lokhande), 'Email' (rajni123@gmail.com), 'Phone' (987 654 3210), 'Name' (rajni), 'Password' (masked with dots), and 'Address' (chandrapur). A 'Register' button is at the bottom center. A link for 'Already Register Click Here!' is at the bottom left. A legend indicates that a red vertical bar next to a field name signifies 'Required Information'.

Figure 3: Registration to new user



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### B. Admin Side Product Registration

In this module admin can add new products with details, update the products, delete the details of all the products and its current offer in products like list of products with low cost, how customers can easily get the product on rent and also can give feedback.

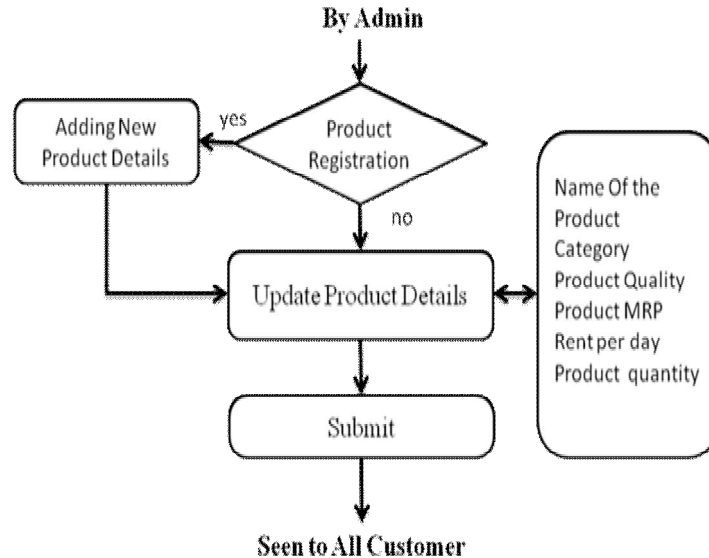


Figure 4: Product Registration

Actions	Product Number	Category	Description	Image URI	MRP	Name	Quantity	Rent Per day
<a href="#">Edit</a> <a href="#">Del</a>	P-000003	Books	It is already checked This book has been.	<a href="http://ecm.images.a...">http://ecm.images.a...</a>	\$600.00	BSNL JTO	12	\$110.00
<a href="#">Edit</a> <a href="#">Del</a>	P-000004	Books	uses for engineer's...	<a href="http://www.sitabara...">http://www.sitabara...</a>	\$200.00	civil engineering	10	\$50.00
<a href="#">Edit</a> <a href="#">Del</a>	P-000005	Books	As per the official no...	<a href="http://www.sitabara...">http://www.sitabara...</a>	\$800.00	SBI PO EXAM	4	\$80.00
<a href="#">Edit</a> <a href="#">Del</a>	P-000006	Books	Quantitative aptitud...	<a href="http://t.blogs...">http://t.blogs...</a>	\$600.00	Quantitative Apti...	10	\$20.00
<a href="#">Edit</a> <a href="#">Del</a>	P-000007	Books	The most details re...	<a href="http://booksbuddi...">http://booksbuddi...</a>	\$1,000.00	SBC computer gra...	5	\$90.00
<a href="#">Edit</a> <a href="#">Del</a>	P-000011	Accessories	Ball And 4s Pro...	<a href="http://www.techtr...">http://www.techtr...</a>	\$5,000.00	Ball projector	6	\$500.00
<a href="#">Edit</a> <a href="#">Del</a>	P-000012	Clothes	Three color avail...	<a href="http://www.monit...">http://www.monit...</a>	\$2,750.00	Laungpatti saree	2	\$200.00
<a href="#">Edit</a> <a href="#">Del</a>	P-000013	Clothes	10 color	<a href="http://blogsimages...">http://blogsimages...</a>	\$5,500.00	kanjivaram saree	20	\$150.00
<a href="#">Edit</a> <a href="#">Del</a>	P-000014	Clothes	New material	<a href="http://behnava.co...">http://behnava.co...</a>	\$2,249.00	Pattani Saree	9	\$100.00
<a href="#">Edit</a> <a href="#">Del</a>	P-000015	Clothes	Most Demanded sv...	<a href="https://3.bp.blos...">https://3.bp.blos...</a>	\$3,880.00	Nauvart	4	\$120.00
<a href="#">Edit</a> <a href="#">Del</a>	P-000016	Accessories	A printer is a device...	<a href="http://3.bp.southea...">http://3.bp.southea...</a>	\$5,000.00	Printer	6	\$200.00
<a href="#">Edit</a> <a href="#">Del</a>	P-000017	Clothes	Three Color Yellow...	<a href="http://www.sou...">http://www.sou...</a>	\$2,093.00	kolkata cotton sarees	3	\$90.00
<a href="#">Edit</a> <a href="#">Del</a>	P-000018	Clothes	Only three callers a...	<a href="https://www.scrib...">https://www.scrib...</a>	\$4,640.00	lehengas	3	\$170.00
<a href="#">Edit</a> <a href="#">Del</a>	P-000019	Clothes	New Quality	<a href="http://www.shriro...">http://www.shriro...</a>	\$5,000.00	wedding suits for m...	10	\$200.00
<a href="#">Edit</a> <a href="#">Del</a>	P-000020	Clothes	Three color availab...	<a href="http://www.dharmas...">http://www.dharmas...</a>	\$2,050.00	One Piece dress	3	\$15.00
<a href="#">Edit</a> <a href="#">Del</a>	P-000021	Clothes	Brand New	<a href="https://i.pinimg.c...">https://i.pinimg.c...</a>	\$2,050.00	Coats	14	\$130.00

Figure 5: Product list

**Product P-000016**

Back to List: Custom Users

Product Detail

Product Number: P-000016

Name: Printer

Category: Accessories

Description: A printer is a device that accepts text and graphic output from a computer and transfers the information to paper.

Image URI: <http://3.bp.southeast-2.amazonaws.com/uc-prod-...>

Created By: Demo Salesforce, 2/12/2017 9:07 AM

Owner: Demo Salesforce (Change)

MRP: \$5,000.00

Rent Per day: \$200.00

Quantity: 6

Last Modified By: Demo Salesforce, 2/26/2017 5:09 AM

Cart

No records to display

Figure 6: Product details at Customer Side

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Product Edit

New Product

Product Edit

Save Save & New Cancel

Information

Name

Category

Description

Image Url

Owner Demo Salesforce

MRP

Rent Per day

Quantity

Save Save & New Cancel

Figure 7: Adding new Product

All Edit Delete Create New View

New Custom User Change Owner

Action	Username	Password	Name	Phone	Email	User Number
Edit   Del	asmila lohhande	asmil12345	asmila	(976) 681-0795	asmilalohhande123@gmail.com	U-0000010
Edit   Del	Devyani Kandalkar	dev@123	Devyani	(987) 045-4810	devyani@gmail.com	U-0000012
Edit   Del	hemant	12345	Hemant		hemant@123.com	U-0000006
Edit   Del	madhu	Madhu@123	madhu	(987) 654-3210	madhu@gmail.com	U-0000011
Edit   Del	Payal Ramteke	Payal@123	Payal	(987) 654-3210	payal91@gmail.com	U-0000015
Edit   Del	Rajni Lohhande	rajni@123	rajni	(987) 654-3210	rajni123@gmail.com	U-0000014
Edit   Del	Rakhi	swati123	Rakhi Dhengre	(986) 020-2869	rakhidhengre@gmail.com	U-0000013
Edit   Del	Snehal	S123	Snehlata R Golam	(818) 086-6531	snehalgolam123@gmail.com	U-0000008
Edit   Del	swati	Swati12345	Swati	(705) 881-1996	swatidhengre@gmail.com	U-0000007
Edit   Del	sweetly sute	sweetly	sweetly	887654321	sweetly@gmail.com	U-0000009
Edit   Del	yash	1234	yash aganwal	+919938125601	yash@yash.com	U-0000001

Figure 8: Users Detail at admin side

Custom User

U-0000015

Customize Page | Edit Layout | Printable View | Help for this Page

Back to List: Custom Users

Custom User Detail

Edit Delete Clone

User Number U-0000015

Owner Demo Salesforce (Change)

Email payal91@gmail.com

Password Payal@123

Address Nagpur

Name Payal

Phone (987) 654-3210

Username Payal Ramteke

Created By Demo Salesforce 2/24/2017 4:10 AM

Last Modified By Demo Salesforce 2/24/2017 4:10 AM

Edit Delete Clone

Figure 9: Users detail at Admin

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Action	Transaction Number	Shipping Address
Edit  Del	T-000000002	Dharampeth, Nagpur
Edit  Del	T-000000003	Nandanwan, Nagpur
Edit  Del	T-000000004	Ramdas Peth, Nagpur
Edit  Del	T-000000005	manevada, nagpur
Edit  Del	T-000000006	manevada
Edit  Del	T-000000007	manevada
Edit  Del	T-000000008	Salandara, Nagpur
Edit  Del	T-000000009	Friends colony, Nagpur
Edit  Del	T-000000010	Ravi Nagar, Nagpur
Edit  Del	T-000000011	Hingna, Nagpur
Edit  Del	T-000000012	civil lines
Edit  Del	T-000000014	Bhagawan Nagar, Nagpur

Figure 10: Transaction list at admin

Name	Category	Description	MRP	Rent Per Day
SSC combined Graduate level	Books	The most details review of best books for SSC CGK. Have covered all Tier 1 sections and solve papers.	\$1,800.00	\$90.00
SBI PO EXAM	Books	As per the official news SBI has changed the pattern of its po main exam according to new pattern. User for banking examination.	\$800.00	\$80.00
Quantitative Aptitude	Books	Quantitative aptitude by RS Agarwal is the most popular and bestselling books used for every competitive exam.	\$600.00	\$20.00
RRB JE	Books	It is already checked. This book has been used for aspirants preparing for RRB, Junior Engineer Recruitment.	\$600.00	\$110.00
Civil engineering	Books	User for engineer students. All content are are visible. Dealing with all the varied aspect of civil engineering.	\$300.00	\$30.00
tops	Clothes	three color available	\$500.00	\$20.00
Capitol	Accessories	Good Quality with different sizes.	\$3,900.00	\$50.00

Figure 11: Products Categories

ONLINE RENTAL SYSTEM

User Details

Welcome madhu

My Cart  
My Transaction  
Back to Product Search

User Update

Enter Your Details

Username: madhu  
Email: madhu@gmail.com  
Phone: (987) 654-3210

Name: madhu  
Password:   
Address: gonda

Update

Figure 12: User update process

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### C. Cart Management

This module helps customers regarding bill details, to get details about their shopping products, current offers on individual product. This module also performs some arithmetic operations for calculating bills.

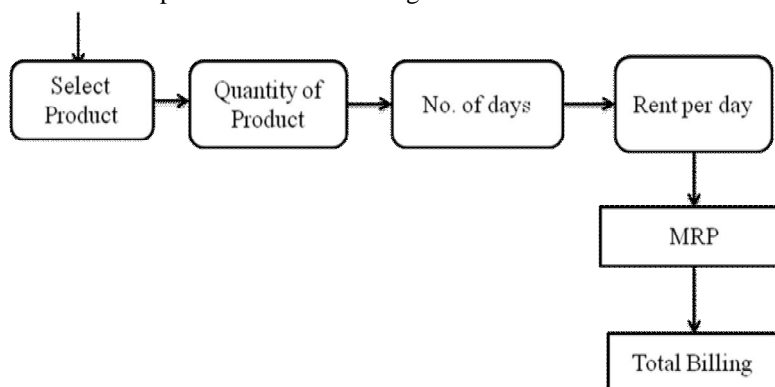


Figure 13: Cart Management

ONLINE RENTEL SYSTEM

User Details


Welcome madhu

[My Profile](#)

[My Transaction](#)

[Back to Product Search](#)

Cart

 **Success:**  
Transaction Complete with id T-000000015

▼ Cart Results

Product Name	Quantity	MRP	Rent Per Day	Number Of Days	Rented/Bought	Amount
<a href="#">Label projector</a>	1	\$5,000.00	\$500.00	3	Rented	\$1,500.00
<a href="#">SSC combined Graduate level</a>	1	\$1,000.00	\$80.00	3	Rented	\$270.00
<a href="#">One Piece dress</a>	4	\$2,050.00	\$15.00	1	Rented	\$60.00

Shipping Address

Waradongai, Nagpur

Figure 14: Cart contents

ONLINE RENTEL SYSTEM		
User Details		
Welcome madhu <a href="#">My Profile</a>		<a href="#">My Cart</a> <a href="#">Back to Product Search</a>
Transaction		
▼ Transaction Results		
Transaction Id	Transaction Date	Shipping Address
T-00000007	2/12/2017 8:45 AM	manevada
T-00000011	2/16/2017 12:51 AM	Hingna, Nagpur

Figure 15: Transaction details



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### IV. CONCLUSION

Online rental system provides advantages to both customers as well as Rental Company to efficiently and effectively manage the business and satisfy customers need at the click of a button. Online rental system provides good business platform for organization and company owners. For customers it is a very good service. So the rent process become online through this concept and it make available various rental products online. It saves time of customer for searching product store and sorting billing problem easily.

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