**Acknowledgement**

I am pleased to present **“Motorcycle Portal”** projectand takethis opportunity to express our profound gratitude to all those people who helped us in completion of this project.

We thank our college for providing us with excellent facilities that helped us to complete and present this project. We would also like to thank the staff members and lab assistants for permitting us to use computers in the lab as and when required.

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**PROJECT OVERVIEW**

Introduction

* This is an online Bike and bike parts store that has listings of various bike along with their features.
* It also consists of Bike service Registration.
* This system allows user to buy bike, bike parts and inventory online.
* System allow user to check various articles submitted by user and even comment on them.
* Credit card payment facility is available.
* This system also consists of ‘Rent a Bike’ feature where user can ask admin for bike on rent.
* The visitor who visits the system must register himself by filling up personal details.
* After registration user can login to the system with his username and password in order to access the system.
* User can check various bike listing and can view each bikes feature.
* User can also check features of the bike as well as inventory parts, and accessories.
* User may select the product and can add the product to shopping cart.
* User can make payment through credit cards by clicking on credit card payment option.
* User must register himself for posting an article.
* This application is a combination of both sales and inventory management of the bike and bike parts.
* User can easily purchase bike or bike parts by using this system user does not have to come manually to shop to purchase the product.
* User can view the bike and bike parts in effective Graphical User Interface.
* User can view features of each product and can compare the products in order to purchase a better product.

Modules and their Description

This system is having 10 Modules:

1. **Visitor Registration**
2. **Visitor Login**
3. **Bike Listing and Features**
4. **Bike Parts listing and Features**
5. **Shopping Cart**
6. **Rent Bike**
7. **Bike Blog Section**
8. **Sell Bike**
9. **Bike Servicing**
10. **Forget Password**

**Description:**

1. **Visitor Registration:**

* In this module user must register himself by filling some personal details.

1. **Visitor Login:**

* After registration user will get user ID and password through which user can login to access the system.

1. **Bike Listing and Features:**

* User can view list of cars and specification of the car.

1. **Bike Parts listing and Features:**

* User can view list of bike parts and specification of the bike parts.

1. **Shopping Cart:**

* User can select the product and add to the shopping cart which he wants to purchase.

1. **Rent Bike:**

* Visitor must register himself for renting bike, he will be charged according to rent per day basic.

1. **Bike Blog Section:**

* Bikers can post article and registered user can comment over it.

1. **Sell Bike:**

* User can even sell their bike and get response from other user.

1. **Bike Servicing:**

* User can register for bike service, where admin will get to know about date and time user wants to come for service.

1. **Forget Password:**

* If user forgets his password he can just click forget password, and he will be asked to enter user id and email id and new password can be sent on user’s email Id, from which he can login into the system.

**PROPOSED SYSTEM**

**Project features:**

* Visitor Registration/ Login module.
* User may check various car listing with features.
* User may check the car features and inventory parts.
* User may select and add products to shopping cart.
* Credit card payment option for car parts shopping.
* Test drive booking registration available.
* Car loan and other car booking facilities available in car buying section.

In the proposed website there are different parts or modules which are summarized as follows:

CUSTOMER REGISTRATION:

Customers are required to register on the website before they can do the shopping. The website also provides several features for the non-registered user. Here they can choose their id and all the details regarding them are collected and a mail is sent to the email address for confirmation.

SHOPPING CART:

Shopping cart module tries to simulate the working of a store where user can view each Part design, size and price of the product available. The items they like can be added to the logical cart and can be removed if not required later. Billing and other payment related matters are handled here.

ADMINISTRATION:

This is the part of the website where the administrators can add, delete or update the product information. Administrators are also responsible for adding and deleting the customers from the website. In addition, newsletter and promotions are also handled by the site administrator via e-mail.

SEARCH:

This facility is provided to both registered and unregistered user. User can search for the availability and type of products available on the website.

ADD TO CART:

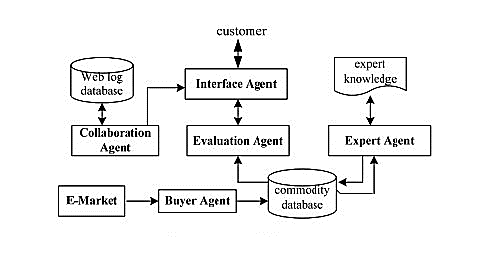
Users can add Bike parts to cart.

CREDIT CARD PAYMENT:

After total bill is calculated user can pay via credit card online.

EMAILING:

On successful payment a thank you message is sent to user. Also Emailing module is concerned about promotions and newsletter and is handled by the administrator. This module is also concerned about sending activation and warning mails.



**The Architecture of Bike Store System**

**Other Features:**

* Sends receipt to customer
* Accommodates up to four types of shipping
* Allows owner to predefine sales tax based a specific state
* Tracks purchases even if user clicks the back button
* Tracks each customer by Shopper ID (SID) (does not use cookies)

**PROJECT DESIGN**

E-R Diagram

access

User

Bike Store & Blog Website

Admin

access

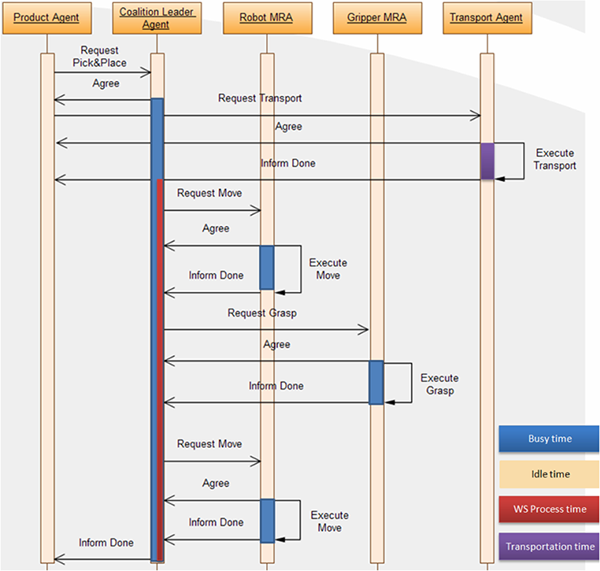
has

New User Registration

Use Case Diagram

****

Sequence Diagram

****

Activity Diagram

****

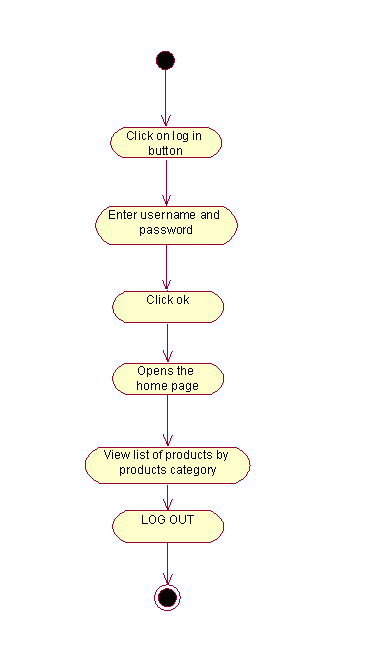
**CUSTOMER**

**USECASE: LOGIN**

****

**CUSTOMER, SALES PERSON, WAREHOUSE EMPLOYEE**

**USECASE: REGISTER**

****

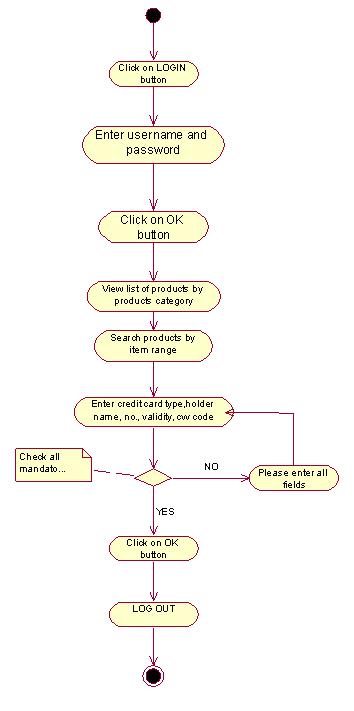
**ACTOR: CUSTOMER**

**USECASE: VIEW THE PRODUCTS**

****

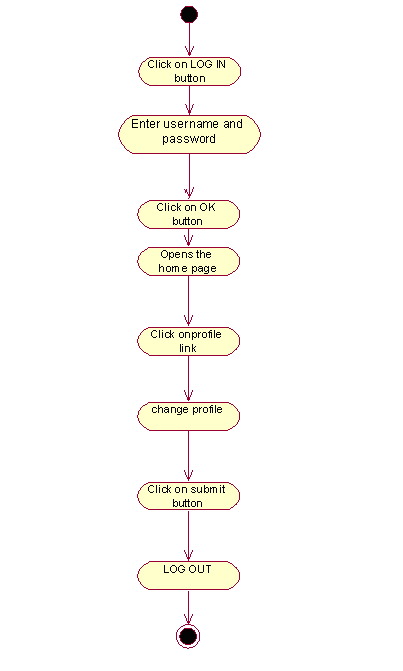
**ACTOR: CUSTOMER**

**USECASE: PLACE ORDER**

****

**ACTOR: CUSTOMER**

**USECASE: MAKE PAYMENT**

****

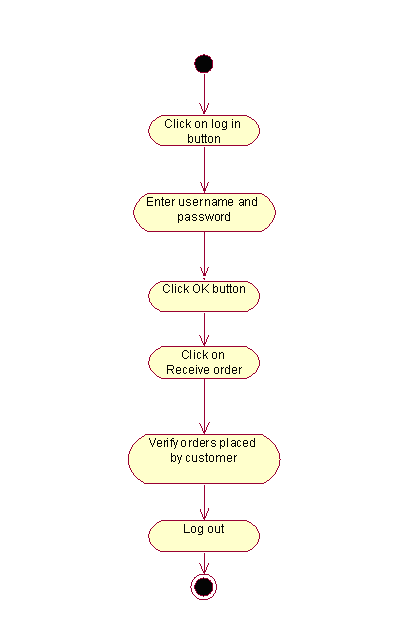
**ACTOR: CUSTOMER**

**USECASE: CHANGE PROFILE**

****

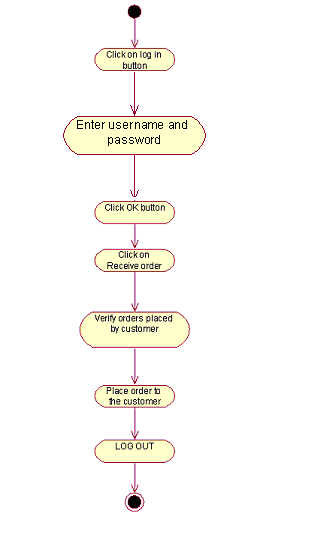
**ACTOR: CUSTOMER, SALES PERSON, WAREHOUSE EMPLOYEE**

**USECASE: LOGOUT**

****

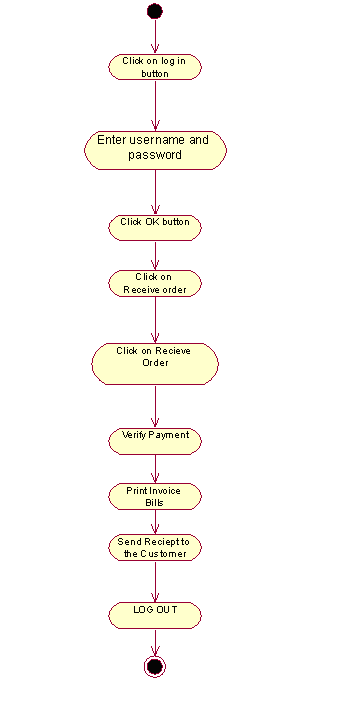
**ACTOR: SALES PERSON**

**USECASE: RECEIVES ORDER**

****

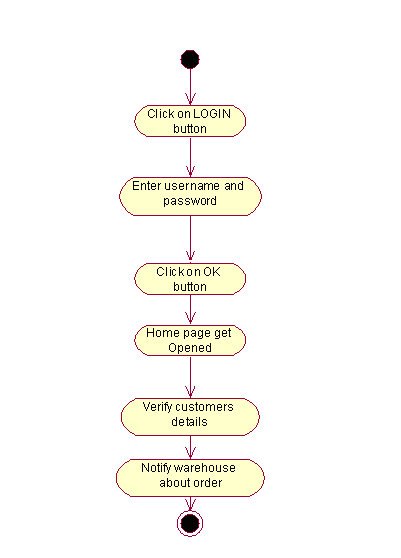
**ACTOR: SALES PERSON**

**USECASE: VERIFY PAYMENT**

****

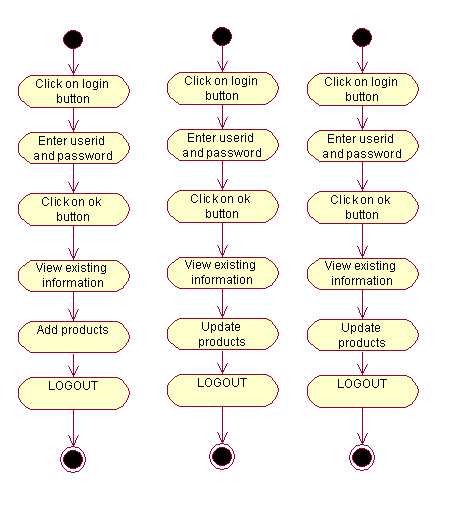
**ACTOR: SALES PERSON**

**USECASE: PRINT INVOICE BILLS**

****

**ACTOR: SALES PERSON**

**USECASE: NOTIFY WAREHOUSE ABOUT ORDER**

****

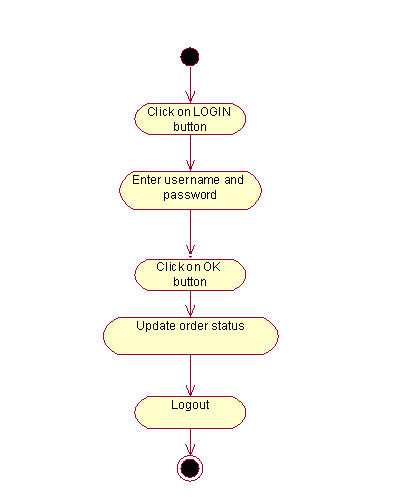
**ACTOR: WAREHOUSE EMPLOYEE**

**USECASE: MANAGE PRODUCT LIST ONLINE**

****

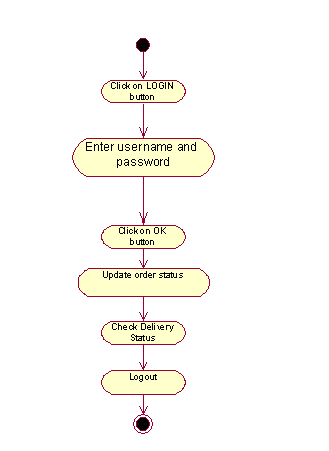
**ACTOR: WAREHOUSE EMPLOYEE**

**USECASE: VIEW INFORMATION OF NEW REGISTRATIONS**

****

**ACTOR: WAREHOUSE EMPLOYEE**

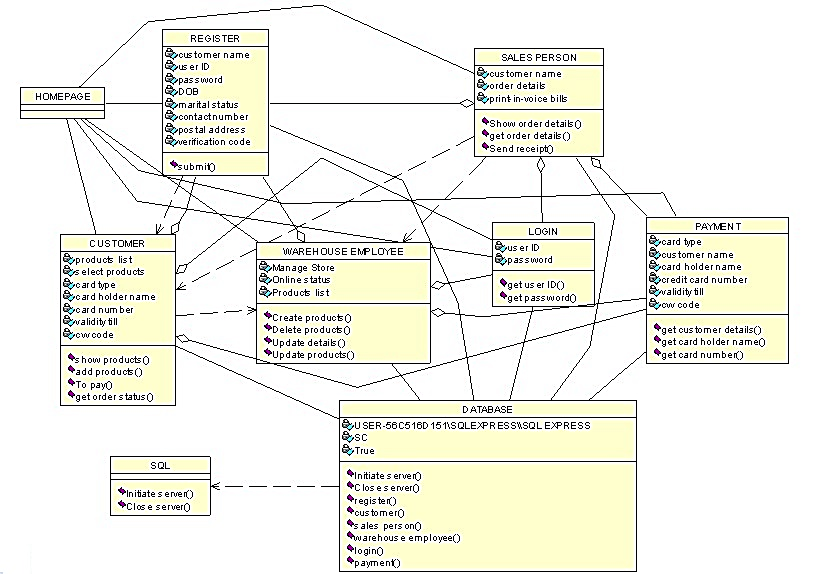
**USECASE: UPDATE ORDER STATUS**

****

**ACTOR: WAREHOUSE EMPLOYEE**

**USECASE: CHECK DELIVERY STATUS**

Class Diagram

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Data Flow Diagram

A data flow diagram is graphical tool used to describe and analyze movement of data through a system. These are the central tool and the basis from which the other components are developed. The transformation of data from input to output, through processed, may be described logically and independently of physical components associated with the system. These are known as the logical data flow diagrams. The physical data flow diagrams show the actual implements and movement of data between people, departments and workstations. A full description of a system actually consists of a set of data flow diagrams. Using two familiar notations Yourdon, Gane and Sarson notation develops the data flow diagrams. Each component in a DFD is labeled with a descriptive name. Process is further identified with a number that will be used for identification purpose. The development of DFD’s is done in several levels. Each process in lower level diagrams can be broken down into a more detailed DFD in the next level. The lop-level diagram is often called context diagram. It consists a single process bit, which plays vital role in studying the current system. The process in the context level diagram is exploded into other process at the first level DFD.

The idea behind the explosion of a process into more process is that understanding at one level of detail is exploded into greater detail at the next level. This is done until further explosion is necessary and an adequate amount of detail is described for analyst to understand the process.

Larry Constantine first developed the DFD as a way of expressing system requirements in a graphical from, this lead to the modular design.

A DFD is also known as a “bubble Chart” has the purpose of clarifying system requirements and identifying major transformations that will become programs in system design. So it is the starting point of the design to the lowest level of detail. A DFD consists of a series of bubbles joined by data flows in the system.

DFD SYMBOLS:

In the DFD, there are four symbols

1. A square defines a source(originator) or destination of system data
2. An arrow identifies data flow. It is the pipeline through which the information flows
3. A circle or a bubble represents a process that transforms incoming data flow into outgoing data flows.
4. An open rectangle is a data store, data at rest or a temporary repository of data

Process that transforms data flow.

Source or Destination of data

Data flow

Data Store

CONSTRUCTING A DFD:

Several rules of thumb are used in drawing DFD’s:

1. Process should be named and numbered for an easy reference. Each name should be representative of the process.
2. The direction of flow is from top to bottom and from left to right. Data traditionally flow from source to the destination although they may flow back to the source. One way to indicate this is to draw long flow line back to a source. An alternative way is to repeat the source symbol as a destination. Since it is used more than once in the DFD it is marked with a short diagonal.
3. When a process is exploded into lower level details, they are numbered.
4. The names of data stores and destinations are written in capital letters. Process and dataflow names have the first letter of each work capitalized

A DFD typically shows the minimum contents of data store. Each data store should contain all the data elements that flow in and out.

Questionnaires should contain all the data elements that flow in and out. Missing interfaces redundancies and like is then accounted for often through interviews.

#### SAILENT FEATURES OF DFD’s

1. The DFD shows flow of data, not of control loops and decision are controlled considerations do not appear on a DFD.
2. The DFD does not indicate the time factor involved in any process whether the data flows take place daily, weekly, monthly or yearly.
3. The sequence of events is not brought out on the DFD.

TYPES OF DATA FLOW DIAGRAMS

1. Current Physical
2. Current Logical
3. New Logical
4. New Physical

CURRENT PHYSICAL:

In Current Physical DFD process label include the name of people or their positions or the names of computer systems that might provide some of the overall system-processing label includes an identification of the technology used to process the data. Similarly data flows and data stores are often labels with the names of the actual physical media on which data are stored such as file folders, computer files, business forms or computer tapes.

CURRENT LOGICAL:

The physical aspects at the system are removed as much as possible so that the current system is reduced to its essence to the data and the processors that transform them regardless of actual physical form.

**NEW LOGICAL**:

This is exactly like a current logical model if the user were completely happy with the user were completely happy with the functionality of the current system but had problems with how it was implemented typically through the new logical model will differ from current logical model while having additional functions, absolute function removal and inefficient flows recognized.

**NEW PHYSICAL:**

The new physical represents only the physical implementation of the new system.

**RULES GOVERNING THE DFD’S**

PROCESS

1. No process can have only outputs.
2. No process can have only inputs. If an object has only inputs than it must be a sink.
3. A process has a verb phrase label.

**DATA STORE**

1. Data cannot move directly from one data store to another data store, a process must move data.
2. Data cannot move directly from an outside source to a data store, a process, which receives, must move data from the source and place the data into data store
3. A data store has a noun phrase label.

**SOURCE OR SINK**

The origin and /or destination of data.

1. Data cannot move direly from a source to sink it must be moved by a process
2. A source and /or sink has a noun phrase land

DATA FLOW

1. A Data Flow has only one direction of flow between symbols. It may flow in both directions between a process and a data store to show a read before an update. The later it usually indicated however by two separate arrows since these happen at different type.
2. A join in DFD means that exactly the same data comes from any of two or more different processes data store or sink to a common location.
3. A data flow cannot go directly back to the same process it leads. There must be at least one other process that handles the data flow produce some other data flow returns the original data into the beginning process.
4. A Data flow to a data store means update (delete or change).
5. A data Flow from a data store means retrieve or use.

Data Flow Diagrams

Bike Store and Blog DB

0.0

User

Database

DATABASE DETAIL

Query

Process

Request

1.0

User

Query

Database

Feedback For

User

Check for user

Requirement

User need

Relevant

Data

1.1

LEVEL 1 DFD

Accept

Query

2.0

User

Check Availability of or for query processing

Process

Query

Give request to user

Via Bike Store and Blog DB

Give info about DB

2.1

2.2

Query

LEVEL 2 DFD: PREDICTION

**PROJECT IMPLEMENTATION**

Project Implementation Technology

The Project is loaded in Visual Studio 2010. We used Visual Studio for Design and coding of project. Created and maintained all databases into SQL Server 2008, in that we create tables, write query for store data or record of project.

* **Hardware Requirement:-**
* i3 Processor Based Computer
* 1GB-Ram
* 5 GB Hard Disk
* **Software Requirement:**
* Windows XP, Windows 7(ultimate & enterprise)
* Visual studio 2010.
* SQL Server 2008.

FEASIBILITY REPORT

Feasibility Studyis a high level capsule version of the entire process intended to answer a number of questions like: What is the problem? Is there any feasible solution to the given problem? Is the problem even worth solving? Feasibility study is conducted once the problem clearly understood. Feasibility study is necessary to determine that the proposed system is Feasible by considering the technical, Operational, and Economical factors. By having a detailed feasibility study the management will have a clear-cut view of the proposed system.

The following feasibilities are considered for the project in order to ensure that the project is variable and it does not have any major obstructions. Feasibility study encompasses the following things:

* Technical Feasibility
* Economic Feasibility
* Operational Feasibility

In this phase, we study the feasibility of all proposed systems, and pick the best feasible solution for the problem. The feasibility is studied based on three main factors as follows.

* Technical Feasibility

In this step, we verify whether the proposed systems are technically feasible or not. i.e., all the technologies required to develop the system are available readily or not.

Technical Feasibility determines whether the organization has the technology and skills necessary to carry out the project and how this should be obtained. The system can be feasible because of the following grounds:

* All necessary technology exists to develop the system.
* This system is too flexible and it can be expanded further.
* This system can give guarantees of accuracy, ease of use, reliability and the data security.
* This system can give instant response to inquire.

Our project is technically feasible because, all the technology needed for our project is readily available.

**Operating System :** Windows XP, 7(ultimate & enterprise)

**Languages :** Asp.Net with C# (**.**Net 2010)

**Database System :** MS-SQL Server 2008

**Documentation Tool :** MS - Word 2013

* Economic Feasibility

Economically, this project is completely feasible because it requires no extra financial investment and with respect to time, it’s completely possible to complete this project in 6 months.

In this step, we verify which proposal is more economical. We compare the financial benefits of the new system with the investment. The new system is economically feasible only when the financial benefits are more than the investments and expenditure. Economic Feasibility determines whether the project goal can be within the resource limits allocated to it or not. It must determine whether it is worthwhile to process with the entire project or whether the benefits obtained from the new system are not worth the costs. Financial benefits must be equal or exceed the costs. In this issue, we should consider:

* The cost to conduct a full system investigation.
* The cost of h/w and s/w for the class of application being considered.
* The development tool.
* The cost of maintenance etc...

Our project is economically feasible because the cost of development is very minimal when compared to financial benefits of the application.

* Operational Feasibility

In this step, we verify different operational factors of the proposed systems like man-power, time etc., whichever solution uses less operational resources, is the best operationally feasible solution. The solution should also be operationally possible to implement. Operational Feasibilitydetermines if the proposed system satisfied user objectives could be fitted into the current system operation.

* The methods of processing and presentation are completely accepted by the clients since they can meet all user requirements.
* The clients have been involved in the planning and development of the system.
* The proposed system will not cause any problem under any circumstances.

Our project is operationally feasible because the time requirements and personnel requirements are satisfied. We are a team of four members and we worked on this project for three working months.

**TESTING**

As the project is on bit large scale, we always need testing to make it successful. If each components work properly in all respect and gives desired output for all kind of inputs then project is said to be successful. So the conclusion is-to make the project successful, it needs to be tested.

The testing done here was System Testing checking whether the user requirements were satisfied. The code for the new system has been written completely using ASP .NET with C# as the coding language, C# as the interface for front-end designing. The new system has been tested well with the help of the users and all the applications have been verified from every nook and corner of the user.

Although some applications were found to be erroneous these applications have been corrected before being implemented. The flow of the forms has been found to be very much in accordance with the actual flow of data.

Levels of Testing

In order to uncover the errors present in different phases we have the concept of levels of testing. The basic levels of testing are:

Client Needs Acceptance Testing

Requirements System Testing

Design Integration Testing

Code Unit Testing

A series of testing is done for the proposed system before the system is ready for the user acceptance testing.

The steps involved in Testing are:

* **Unit Testing**

Unit testing focuses verification efforts on the smallest unit of the software design**,** the module**.** This is also known as “Module Testing”**.** The modules are tested separately**.** This testing carried out during programming stage itself**.** In this testing each module is found to be working satisfactorily as regards to the expected output from the module**.**

* **Integration Testing**

Data can be grossed across an interface**;** one module can have adverse efforts on another**.** Integration testing is systematic testing for construction the program structure while at the same time conducting tests to uncover errors associated with in the interface. The objective is to take unit tested modules and build a program structure**.** All the modules are combined and tested as a whole**.** Here correction is difficult because the isolation of cause is complicate by the vast expense of the entire program. Thus in the integration testing stop**,** all the errors uncovered are corrected for the text testing steps**.**

* **System testing**

System testing is the stage of implementation that is aimed at ensuring that the system works accurately and efficiently for live operation commences. Testing is vital to the success of the system. System testing makes a logical assumption that if all the parts of the system are correct, then goal will be successfully achieved.

* **Validation Testing**

At the conclusion of integration testing software is completely assembled as a package, interfacing errors have been uncovered and corrected and a final series of software tests begins**,** validation test begins**.** Validation test can be defined in many ways**.** But the simple definition is that validation succeeds when the software function in a manner that can reasonably expected by the customer. After validation test has been conducted one of two possible conditions exists.

One is the function or performance characteristics confirm to specifications and are accepted and the other is deviation from specification is uncovered and a deficiency list is created. Proposed system under consideration has been tested by using validation testing and found to be working satisfactorily.

* **Output Testing**

After performing validation testing, the next step is output testing of the proposed system since no system could be useful if it does not produce the required output in the specified format. Asking the users about the format required by them tests the outputs generated by the system under consideration. Here the output format is considered in two ways, one is on the screen and other is the printed format. The output format on the screen is found to be correct as the format was designed in the system designed phase according to the user needs.

For the hard copy also the output comes as the specified requirements by the users. Hence output testing does not result any corrections in the system.

* **User Acceptance Testing**

User acceptance of a system is the key factor of the success of any system. The system under study is tested for the user acceptance by constantly keeping in touch with the prospective system users at the time of developing and making changes wherever required.

**ADVANTAGES OF PROJECT**

* User does not have to go manually to purchase the product, this saves time as well as human effort of the user.
* User can view features of each product and can compare the products in order to purchase a better product.
* User can view products in effective graphical user interface.
* User gets to sell his bike at right price to right person.

**Disadvantages:**

* Visual effect of product during manually purchasing the product is different from viewing the product in your device.

**Application:**

* This application is useful for many bike firms who want to give full support to their customers.

**Website is:**

1. Load Balancing:

Since the system will be available only the admin logs in the amount of load on server will be limited to time period of admin access.

1. Easy Accessibility:

Records can be easily accessed and store and other information respectively.

1. User Friendly:

The Website will be giving a very user friendly approach for all user.

1. Efficient and reliable:

Maintaining the all secured and database on the server which will be accessible according the user requirement without any maintenance cost will be a very efficient as compared to storing all the customer data on the spreadsheet or in physically in the record books.

1. Easy maintenance:

Bike Store and Blog Website is design as easy way. So maintenance is also easy.

**CONCLUSION**

The project **“Motorcycle Portal”** is something like the original Bike shop with shopping cart that is used by the customer in selecting certain products. Finally after selection the customer confirms orders for all the purchasing items and submits his/her account details with tax information at the checkout counter.

Shopping cart is used around the world in e-commerce to manage business through online. There are different kinds of software available that are useful for all in making purchase online. Through this software, one can choose the purchasing item and the software calculates the net amount for the order including packaging, moving and also taxes if applicable.

The software collects the credit card information of the customer and it provides a secure gateway for all kinds of transaction online. The shopping cart software provides a reliable platform for keeping all sensitive information. For this kind of online business, the special software must be installed on the server which host the site, or on a secure server which receives all sensitive data.

Shopping cart software is its security as better security can attract customer by protecting their personal information. Security features include encrypting information and using a reputable processing service for credit cards.

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