

Access to National Agricultural Commodity Price Data

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DECLARATION

In accordance with the requirements of the degree of Bachelor of Computer Science and Engineering, I present the following thesis entitled '*Access to National Agriculture Commodity Price Data*'. This work was performed under the supervision of Matin Saad Abdullah.

I hereby declare that the work submitted in this thesis is my own and based on the results found by myself. Materials of work found by other researcher are mentioned by reference. This thesis, neither in whole nor in part, has been previously submitted for any degree.

Signature of
Supervisor

Signature of
Author

ACKNOWLEDGEMENT

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ABSTRACT

Bangladesh bureau of statistics provides statistical data, publications and reports based on survey and analysis of data. They provide a format of statistical data to the user.

The main objective of BBS is to make important national data available to users. BBS claims that its data is available on a website however when one log into the website (<http://www.bbs.gov.bd/>) which is still under construction and another (<http://www.bbsgov.org/>) is not accessible.

Our aim is to study accessibility issues that include data storage, data analysis, manipulation and user needs. An important feature of our study would be the format in which users need the data. The data storage design would be examine in light of this need.

We design website of agricultural commodity price that allows easy access of BBS data.

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CHAPTER I: INTRODUCTION

Bangladesh bureau of statistics provides statistical data, publications and reports based on survey and analysis of data. They provide a format of statistical data to the user. There are several departments in “Bangladesh bureau of statistics” Each of the department is called wings. Each wing has a DG (Director General) who controls each of the department. We visited Agricultural wings and computer wings to gather information about some agricultural commodity statistical report.

The main objective of BBS is to make important national data available to users. BBS claims that its data is available on a website however when one log into the website (<http://www.bbs.gov.bd/>) which is still under construction and another (<http://www.bbsgov.org/>) is not accessible.

There are 3 procedure of collecting statistical data. One way is to write an application directly to DG and request for data. Another procedure of data collection is to visit their website. Another way of collecting statistical data is to buy their yearly publications.

The data collection system of Bangladesh bureau of statistics is manual processes which consume time, money and which does not always provide reliability of data. We decided to do our thesis on the accessibility issue of the user so that a user can get his/her desired data on time. We also ensure some of the reliability issue of data.

When a user need and request for statistical data then he/she need to follow lots of procedures and sufferings from which we can see that data is not directly accessible to the user. We build a web interface from which a user can easily access data.

1.1 EXISTING SYSTEM:

Existing data collection and user accessibility system is fully manual system. A user need to follow lots of steps which is time consuming and cost involved. There are many drawbacks of the manual system.

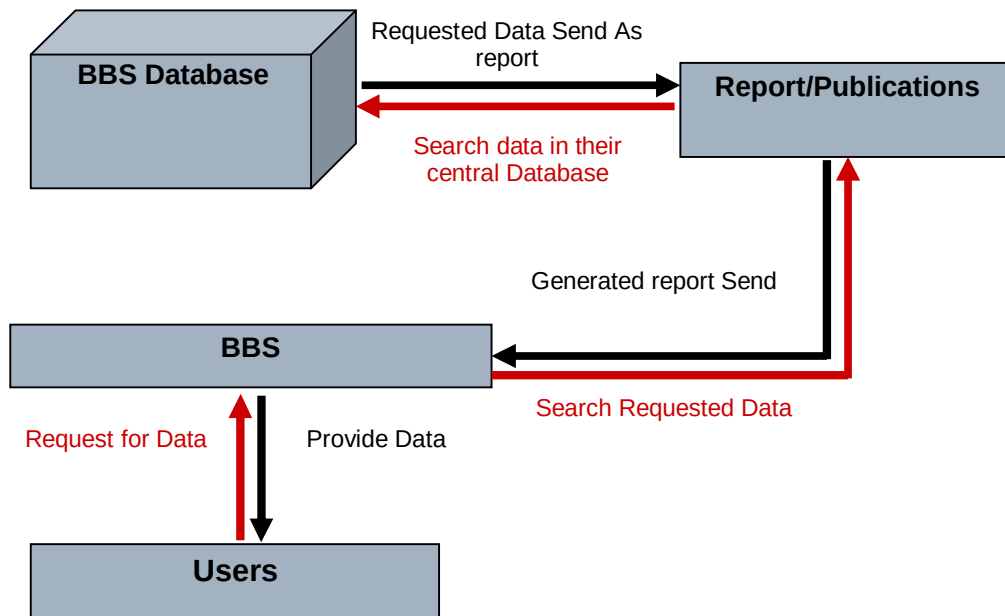


Figure 1: Existing System (accessibility of Data)

There are 3 procedure of collecting statistical data. One way is to write an application directly to DG and request for data. Then if DG approves his application and data is readily available only then he gets the data. Another procedure of data collection is to visit their website which is not available and under construction. Another way of collecting statistical data is to buy their yearly publications which are not updated regularly.

1.2 CHALLENGES IN EXISTING SYSTEM:

1.2.1 Challenges of current manual system:

From collection to generate report is done by hand which is fully manual system.

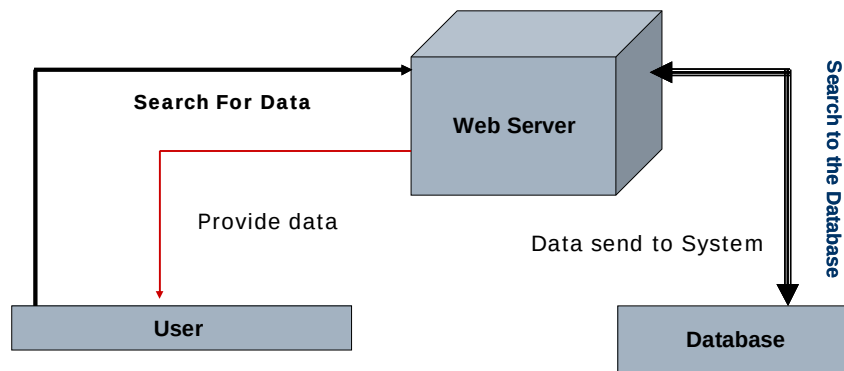
- Manual Data collection system.
- Require more manpower.
- Reliability of data is not guaranteed.
- Costly.
- Backdated data.
- Data access is time consuming.
- Data collection is time consuming.
- User need to maintain lots of formalized procedure for data access.

1.3 SOLUTION REQUIRED:

According to the challenges studied we found some problems. One is data collection from different markets, where good communication infrastructure is not available. Second is received data needs to be input into the system, that is processing report and search option.

1.4 OUR PROPOSED SOLUTION:

To overcome the challenges of Data collection our proposed solution is to build a web based user interface where user can easily access and generate report and advanced user can update product information regularly.



Web interface Data Flow

Figure 2: Our proposed Solution

In Our proposed solution a user logs in to the web interface and complete registration and then can view data search for data and generate report from the existing data.

CHAPTER II: SYSTEM DEVELOPMENT

2.1 METHODOLOGY:

We followed the SDLC process for system development.

2.1.1 Phase 1: Project Identification and Selection:

- Learn how the existing system works and how much of the system have been automated and current challenges and problems of existing system. For this reason we visited Bangladesh Bureau of Statistics, talked to both with the people of agricultural wings department and also with the people of computer section.
- Review the system for solving prevailing drawbacks.
- Determine the requirements for the proposed system.
- Structure the system requirements using Context diagram.
- Build E-R Diagram (Entity Relationship Diagram).

2.1.2 Phase 2: Project Initiation and Planning:

2.1.2.1 Project Initiation:

- Build up the project initiation team.
- Developing a plan to get the project started.

2.1.2.2 Project Planning

- Defining clear, discrete activities and the work needed to complete each activity.
- Make baseline Project Plan (BPP)
 - ✓ Scope
 - ✓ Benefits
 - ✓ Costs
 - ✓ Risks
 - ✓ Resources
- Outlines work needed to be performed.
- High-level description of system.

- Lists all work to be performed.

2.1.2.3 Assessing Project Feasibility

- Economic
- Operational
- Technical
- Schedule

2.1.3 Phase 3: Analysis:

Gather information on what system should do from many sources. Information collected from users, Existing documents and files, Computer-based information, Understanding of organizational components, Information needs, Rules of data processing, Key events, Gather facts, opinions and speculations, Be neutral, listen and Seek a diverse view, Problems with existing system, Opportunity to meet new need, Reasons for current system design, Prototyping, build rudimentary version of system is built, Quickly converts requirements to working version of system. Once the user sees requirements converted to system will ask for modifications or will generate additional requests.

2.1.4 Phase 4: System Design:

Design the logical database. Need to consider all inputs, outputs and every data element on the E-R Diagram. Finalize the prototyping that meet all the requirements. Based on that prototype design the physical database, we use the relational database model Design the forms and reports. Finalize the Interfaces, Dialogues and design specification.

2.1.5 Phase 5: Implementation:

Code the system according to the design specification. Test the new system and after the successful testing install the system. Prepare the Documentation for the System.

2.2 FINALIZED INTERFACE:

Fully workable prototype was build. Excel and its macro were used to quickly build a prototype. The prototype is able to produce General report, search option include search by Division, Search by Market, Search by Commodity.

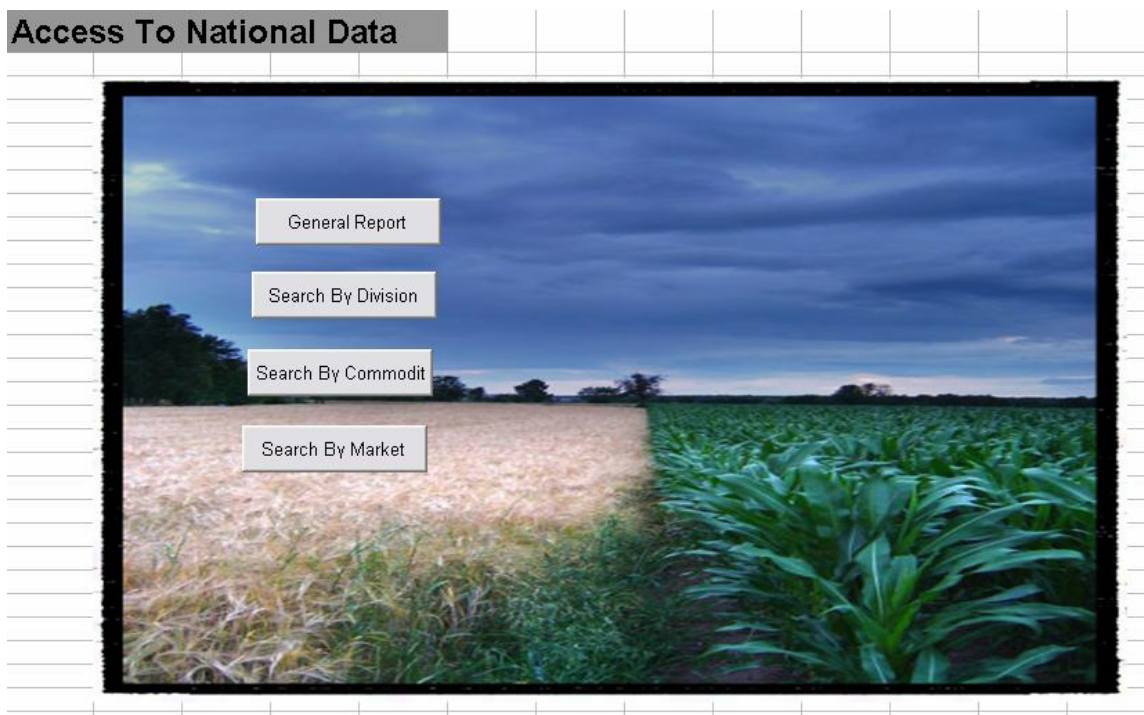


Figure 3: Main window of the prototype

This prototype search and produce general report based on the user preference of search option

Commodity Information			Market information		
Commodity Nam	Specification	Unit	District/Town	Market Name	Marketing Day
Rice-aus	Fine	kg	Dhaka	Kalampur	Monday
Rice-aus	Boiled,medium	kg	Dhaka	Devinagar	Thursday
Rice-aus	Coarse	kg	Mymensingh	Nandail	Saturday
Rice-aman	Fine	kg	Bandarban	Lama Bazar	Sunday
Rice-aman	Boiled,medium	kg	Jamalpur	Nandina	Friday
Rice-aman	Coarse	kg	Jamalpur	Aramnagar	Monday
Rice-boro	Fine	kg	Tangail	Korotia	Thursday
Rice-boro	Boiled,medium	kg	Tangail	Modupur	Tuesday
Rice-boro	Coarse	kg	Kishorganj	Karimganj	Tuesday
Flour-Atta	Superior quality	kg	Kishorganj	Hosenganj	Sunday
Pulses-Moong	Split,Kutchu	kg	Netrokona	Shamganl	Friday
Pulses-Masur	Husked,whole	kg	Netrokona	Teligati	Friday
Pulses-Khesari	Superior quality	kg	Faridpur	Kanaipur	Tuesday
Pulses-Matar	Superior quality	kg	Faridpur	Kadirdi	Monday
Pulses-Gram	Superior quality	kg	Munshiganj	Munsirhat	Saturday
Pulse-Maskalai	Superior quality	kg	Munshiganj	Betka	Sunday

Figure 4: Data Scheme of the Prototype

In our prototype we fixed the input and the search option link to this input data scheme.

Microsoft Excel

Search By Market Name:

OK

Cancel

Lama Bazar

Figure 5: Input Box of Prototype

User can search by Market Name. Each time a new input box is open then it takes input and generates short report.

Search Result								
Division Name	District Name	Upazila Name	Union Name	Market Name	Product Name	Max Price	Min Price	Daily Date
Chittagong	Bandarban	Lama	Lama	Lama Bazar	Rice-aman	14	10	12/03/2005
Chittagong	Bandarban	Lama	Lama	Lama Bazar	Flour-Atta	18	17	12/03/2005

Figure 6: Search result as Report.

User can view Search result as short Report format.

General Report								
Division Name	District Name	Upazila Name	Union Name	Market Name	Product Name	Max Price	Min Price	Daily Date
Chittagong	Noakhali	Hatiya	Burirchar	Birirchar bazar	Rice-boro	15	10	12/03/2005
Borisal	Jhalokati	Nalchity	Ward 1	gouronodi bazar	Rice-aman	12	10	12/03/2005
Dhaka	Shariatpur	Palong	Angaria	palong bazar	Rice-aus	14	12	12/03/2005
Chittagong	Bandarban	Lama	Lama	Lama Bazar	Flour-Atta	18	17	12/03/2005
Sylhet	Sunamganj	Tahirpur	Tahirpur	Tahirpur bazar	Pulses-Matar	35	32	12/01/2005
Chittagong	Bandarban	Lama	Lama	Lama Bazar	Rice-aman	14	10	12/03/2005
Dhaka	Shariatpur	Palong	Angaria	palong bazar	Pulses-Gram	26	24	12/03/2005
Borisal	Patuakhali	Kalapara	Mithaganj	kalapara bazar	Rice-aman	12	10	10/02/2005
Rajshahi	Rangpur	Badar Ganj	Gopalpur	gopalpur bazar	Rice-boro	18	16	12/02/2005
Rajshahi	Shirajganj	Ullah Para	Bangla	bangla bazar	Rice-aman	12	10	12/03/2005
Khulna	Magura	Magura Sadar	ward 1	Putia bazar	Flour-Atta	20	18	12/03/2005

Figure 7: General Report.

A General report contains Division name, District name, Upazila name, Union name, Market name, Product name, Maximum price, Minimum price and daily

date. User can generate general report. In each step of searching there is an option Add to general report.

2.3 BLOCK DIAGRAM OF THE OVERALL SYSTEM

Access to National Agricultural commodity price data.

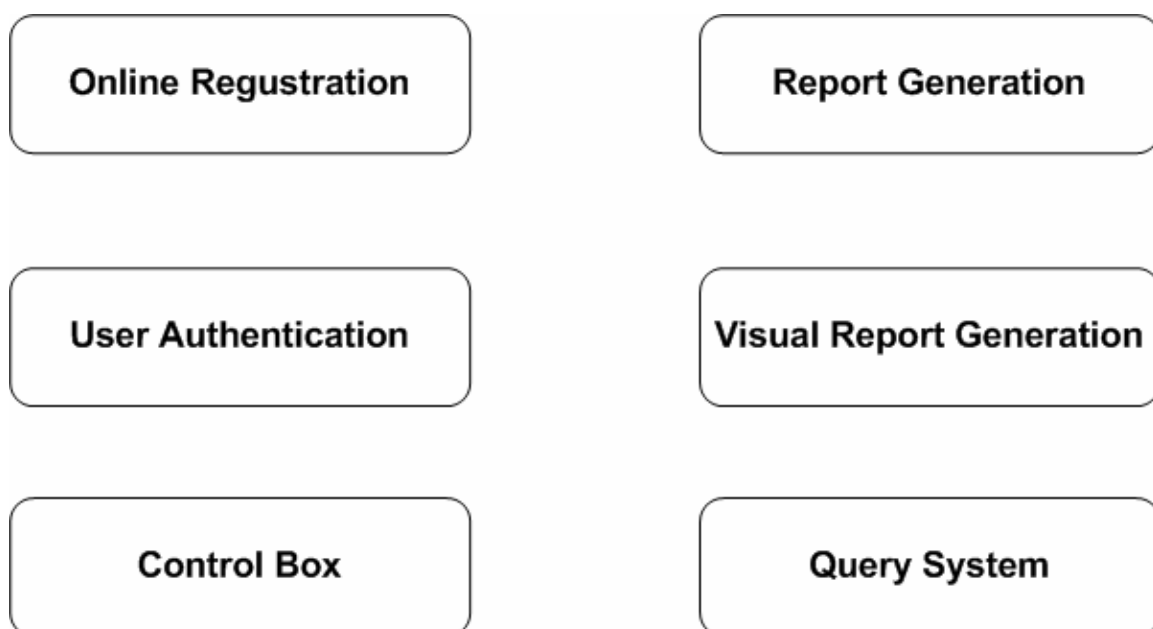


Figure 8: Block diagram of overall system

2.4 MY MODULES

Access to National Agricultural commodity price data.

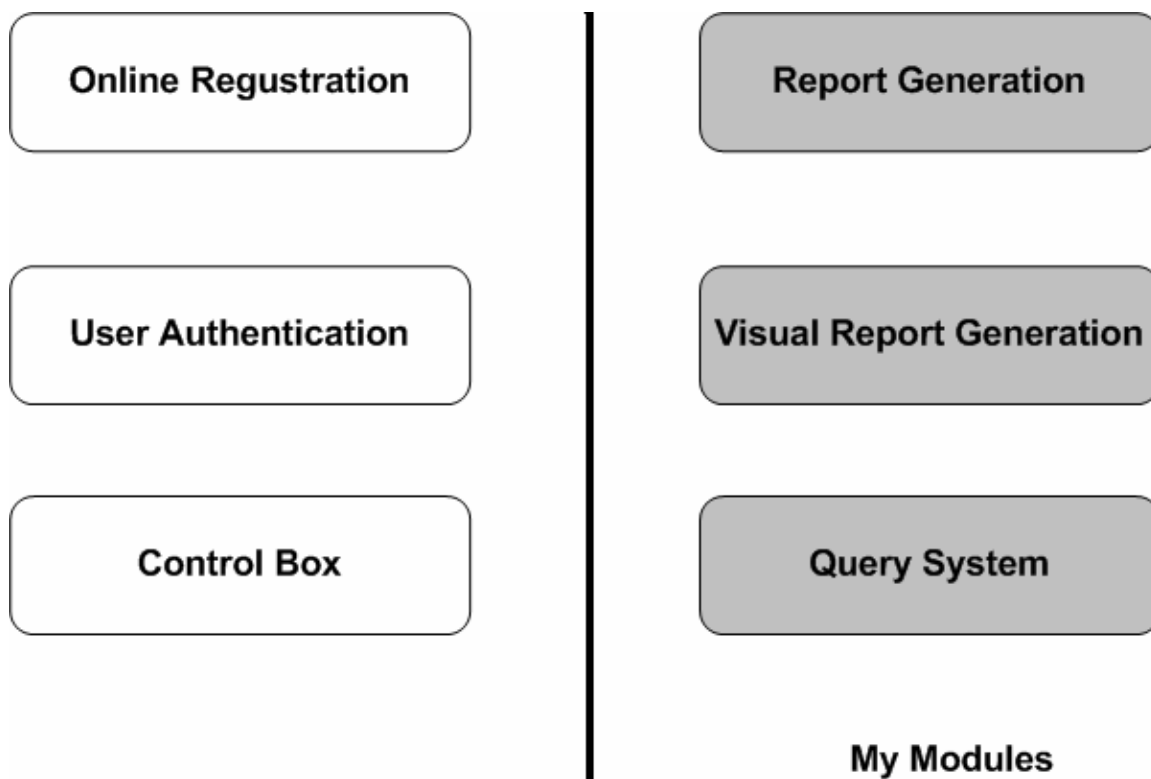


Figure 9: My modules

Group members and responsibility

Group Members		Responsibilities
Name	ID:	
Arman Mursalin Amin	01101056	1. Online Registration 2. User Authentication 3. Control Box
Fahim Iqbal	01101031	1. Report Generation 2. Visual Report Generation 3. Query System

Figure 10: Showing the members responsibilities

The shaded portion is my modules. Descriptions of my modules are given in the next section.

2.5 INTRODUCTION TO MY MODULES

I am responsible for the following modules: -

1. Report Generation.
2. Visual Report Generation.
3. Query System.

2.5.1 Report Generation:

Reports can be generated in five ways. Firstly, a general report can be generating which include all detailed information. Secondly, a division wise report can be generated which include the detail information of division, thirdly, a product wise report can be generated which include the detail information of product, fourthly, a day wise report can be generated which include the detail information of days and finally a date wise report can be generated which include the detail information of date.

2.5.2 Visual Report Generation:

Advance user can generate report by clicking on the certain place of the map. The whole map of Bangladesh is divided into several parts. User clicks on a specific area and gets the information of that place which is queried from the database. Up to now division wise report can be generated from the map.

2.5.3 Query system:

This system helps the registered user to search in the system. There are two different methods for searching. One is normal searching and another is Advance searching.

In normal searching user can search by market day, market, code and product. If a user wants to search by market day he has to just enter the name of the specific day or part of the name of the day the system automatically search

the database and show the result. Like market day other three search options work as well as the same.

In advance searching, there are many options for searching. A user can search by many keyword or part of the keyword. In advance search the search keys are division, districts, upazila, union, product name, market day and date. User can put one or more than one keyword at a time in the search field.

2.6 ANALYSIS

2.6.1 Information Gathering

First, we visited to the Bangladesh bureau of statistics and talked with some employee's who are responsible for collection, analyze and processing data and to generate publication of statistical data. We had tried to find how they collect the statistics and the procedure of their system. Interview session is placed. We collected some documents and

reports. Also we try to find out the lacking of the current system. Then we tried to find out current system requirements and define what our proposed system requirements would be. We also found out about the operation and issue of the current system and needs for system that we want to develop.

2.7 CONTEXT DIAGRAM

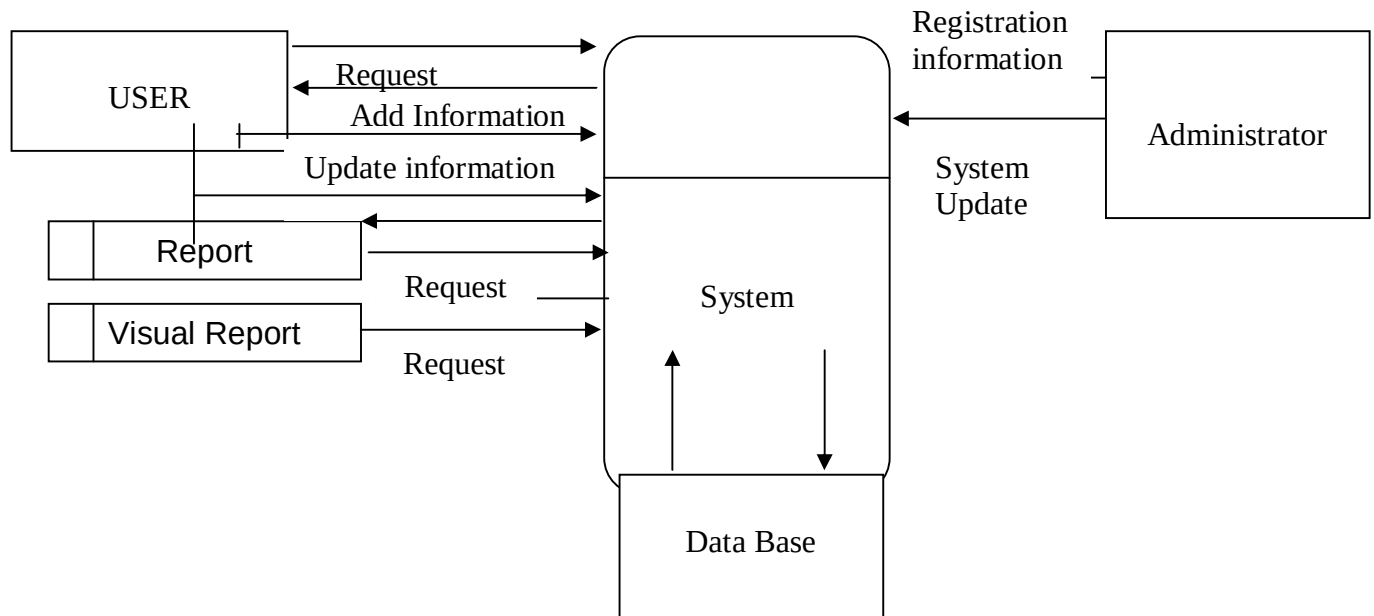


Figure11: Context diagram

The user places the request to the system. The administrator checks authentication. Administrators allow user to enter the system. Then the user can see the updated information. He can generate report by his choice. He can generate normal report or visual report by clicking the map.

2.8 DATA BASE DESIGN

Database is an essential part of this system. It should be well designed for reliable data access and manipulations. In the following section the detailed design is available.

In the main database there are 7 main entities and there are 4 more entity for user control.

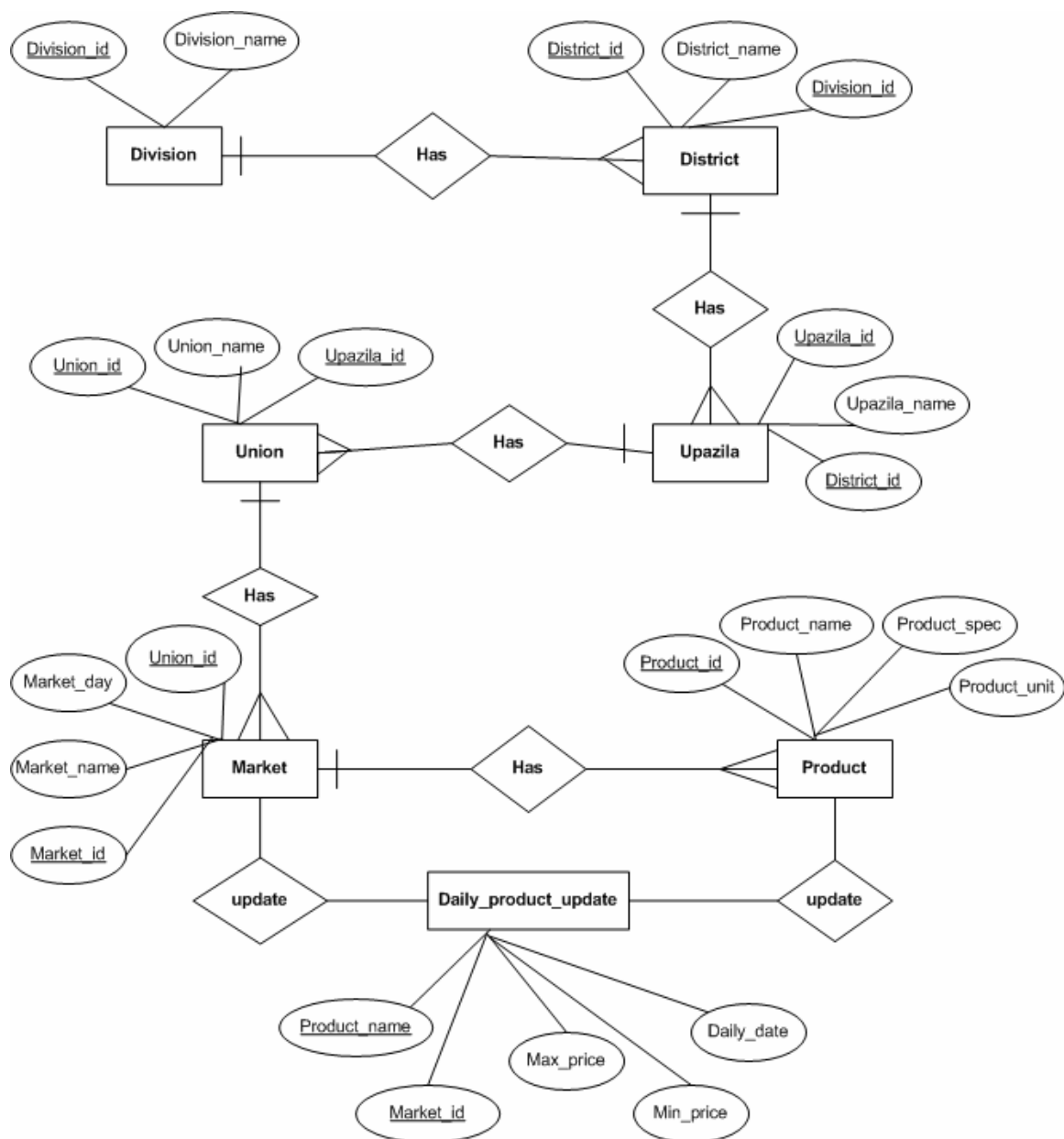
In the entity relationship diagram shown in fig 12.1 and 12.2 shows all the main entity of the database.

A Division has many districts and a district has many upazila and an upazila has many unions and under a union there might has many market. Each market has various types of product and each product is daily updated and also each market is daily updated for the specific product entity.

There are 4 types of user in the database one is normal user which is under user_info entity and webmaster. There are admin user and advanced user as well in the database.

.

2.8.1 Entity Relationship Diagram (ERD)

**Figure 12.1:** Entity Relationship Diagram

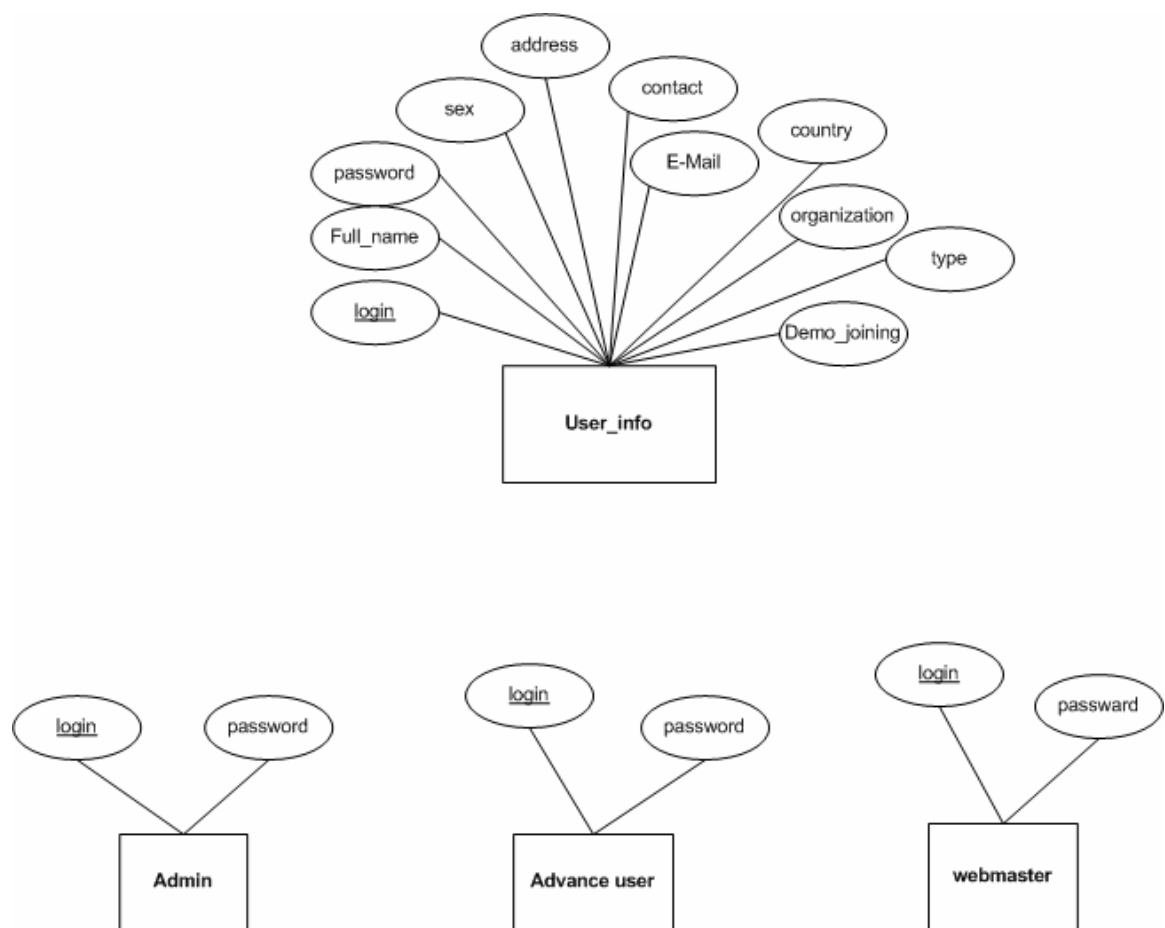


Figure 12.2: Entity Relationship Diagram

2.8.2 Table Design

1. Table Name: country

Purpose: Keeps the information of a country.

Field	Type
<u>name</u>	varchar(30)

Description: This table contains the information of a country. Each country has different name. Here name is the primary key.

country(name)

2. Table Name: division

Purpose: Keep information of divisions.

Field	Type
division_id	varchar(10)
<u>division_name</u>	varchar(20)

Description: division table contains two fields to keep information about the divisions. These are division_id and division_name. Here division_name is the primary key.

division(division_id , division_name)

3. Table Name: borishal

Purpose: Keeps the information of a division.

Field	Type
<u>division_name</u>	varchar(20)

Description: This table contains the information of each division. Each division has different division name. Here division_name is the primary key.

borishal(division_name)

4. Table Name: chittagong

Purpose: Keeps the information of a division.

Field	Type
<u>division_name</u>	varchar(20)

Description: This table contains the information of each division. Each division has different division name. Here division_name is the primary key.

chittagong(division_name)

5. Table Name: dhaka

Purpose: Keeps the information of a division.

Field	Type
<u>division_name</u>	varchar(20)

Description: This table contains the information of each division. Each division has different division name. Here division_name is the primary key.

dhaka(division_name)

6. Table Name: khulna

Purpose: Keeps the information of a division.

Field	Type
<u>division_name</u>	varchar(20)

Description: This table contains the information of each division. Each division has different division name. Here division_name is the primary key.

khulna(division_name)

7. Table Name: rajshahi

Purpose: Keeps the information of a division.

Field	Type
<u>division_name</u>	varchar(20)

Description: This table contains the information of each division. Each division has different division name. Here division_name is the primary key.

rajshahi(division_name)

8. Table Name: sylhet

Purpose: Keeps the information of a division.

Field	Type
<u>division_name</u>	varchar(20)

Description: This table contains the information of each division. Each division has different division name. Here division_name is the primary key.

sylhet(division_name)

9. Table Name: district

Purpose: Keeps the information of districts.

Field	Type
<u>district_id</u>	varchar(10)
<u>district_name</u>	varchar(20)
division_name	varchar(20)

Description: Keeps the information of each district. This table contains 3 fields. These are district_id, district_name and division_name. Here district_name is primay key and division name is foreign key.

district(district_id,district_name, division_name)

10. Table Name: upazila

Purpose: Keeps the information of upazila.

Field	Type
<u>upazila_id</u>	varchar(10)
upazila_name	varchar(30)
district_name	varchar(20)

Description: Keeps the information of each upazila. This table contains 3 fields. These are upazila_id, upazila_name and district_name. Here upazila_id is primay key and district_name is foreign key.

upazila(upazila_id,upazila_name, district_name)

11. Table Name: union

Purpose: Keeps the information of unions.

Field	Type
<u>union_id</u>	varchar(10)
union_name	varchar(20)
upazila_name	varchar(10)

Description: Keeps the information of each union. This table contains 3 fields. These are union_id, union_name and upazila_name. Here union_id is primary key.

union (union_id, union_name, upazila_name)

12. Table Name: day

Purpose: Keeps the information of a day.

Field	Type
<u>day</u>	varchar(20)

Description: This table contains the information of day. There are seven market days. Here day is the primary key.

day(day)

13. Table Name: market

Purpose: Keeps the information of market name and market day.

Field	Type
<u>market_id</u>	int(20)
market_name	varchar(20)
market_day	varchar(50)
union_id	int(10)

Description: market table contains the descriptions about the market. What is the market name and in which day which market is open. This table contains 4 fields. These are market_id, market_name, market day, union_id. Here market_id is primary key and union_id is foreign key.

market (market_id, market_name, market_day, union_id)

14. Table Name: product

Purpose: Keeps the information of product.

Field	Type
<u>product_id</u>	int(10)
product_name	varchar(30)
product_spec	varchar(30)
product_unit	varchar(10)

Description: product table contains the descriptions about the product and product specifications. This table contains 4 fields. These are product_id, product_name, product_spec, product_unit. Here product_id is primary key.

product (product_id,product_name,product_spec, product_unit)

15. Table Name: daily_product_update

Purpose: Keeps the information of daily product update.

Field	Type
product_name	varchar(30)
market_id	Int(20)
max_price	Double
min_price	Double
daily_date	varchar(20)

Description: daily_product_update table contains the update information of product of the markets. Each day the market price may be updated. This table contains 5 fields. These are product_name, market_id, max_price, min_price and daily_date. Here product_name and market_id are foreign key.

daily_product_update(product_name,market_id,max_price,min_price,Order_status,shift)

16. Table Name: user_info

Purpose: keeps the information of a user.

Field	Type
<u>Login</u>	varchar(20)
full_name	varchar(100)
password	varchar(100)
Sex	varchar(20)
Address	varchar(150)
Contact	varchar(100)
e_mail	varchar(100)
Country	varchar(100)
Organization	varchar(100)
demo_joining	varchar(20)
Type	varchar(10)

Description: user_info table contains the detail information about a user. This table contains 11 fields. These are login, full_name, password,sex, address contact, e_mail, country, organization, demo_joining and type. Here login is primary key.

user_info(login , full_name, password, sex, address, contact, e_mail, country, organization, demo_joining, type)

2.9 DIALOG DESIGN, FORMS AND INTERFACE DESIGN

During dialog design our system Focus on how information is provided to and captured from users. A good human-computer interface provides a unifying structure for finding, viewing and invoking the different components of a system. One objective of interface design is to reduce data entry errors. From the prototype we anticipate user errors. We design the system's interfaces to avoid, detect and correct data entry mistakes.

2.9.1 Interface Design

System inputs and outputs are produced at the end of the analysis phase precise appearance was not defined during this phase. Forms and reports are produced on the basis of the E-R diagrams. From prototype we have clear idea about the user forms and who will use them and how.

2.9.1.1 Form: System Interface



Figure 13: System Interface

This is the form of the System Interface.

2.9.1.2 Form: Log in

Login	
Password	

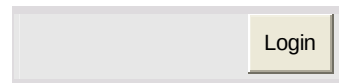


Figure 14: Log In Form

This is the form through which user will log In.

2.9.1.3 Form: Report Generation

general_report - Microsoft Internet Explorer

Address: http://localhost/gis/user/general_report.php

General Report
Total Records: 17

Division Name	District Name	Upazila Name	Union Name	Market Name	Product Name	Max Price	Min Price	Daily Date
Chittagong	Noakhali	Hatiya	Burinchar	Birinchar bazar	Rice-boro	15	10	12/03/2005
Borissal	Jhalokati	Nalchity	Ward 1	gouronodi bazar	Rice-aman	12	10	12/03/2005
Dhaka	Shariatpur	Palong	Angaria	palong bazar	Rice-aman	14	12	12/03/2005
Chittagong	Bandarban	Lama	Lama	Lama Bazar	Flour-Atta	18	17	12/03/2005
Sylhet	Sunamganj	Tahirpur	Tahirpur	Tahirpur bazar	Pulses-Matar	35	32	12/01/2005
Chittagong	Bandarban	Lama	Lama	Lama Bazar	Rice-aman	14	10	12/03/2005
Dhaka	Shariatpur	Palong	Angaria	palong bazar	Pulses-Gram	26	24	12/03/2005
Borissal	Patuakhali	Kalapara	Mithaganj	kalapara bazar	Rice-aman	12	10	10/02/2005
Rajshahi	Rangpur	Badar Ganj	Gopalpur	gopalpur bazar	Rice-boro	18	16	12/02/2005
Rajshahi	Shariatpur	Ullah Para	Bangla	bangla bazar	Rice-aman	12	10	12/03/2005
Khulna	Magura	Magura Sadar	ward 1	Putia bazar	Flour-Atta	20	18	12/03/2005
Chittagong	Bandarban	Lama	Lama	Lama Bazar	Rice-boro	14	13	12/02/2005
Chittagong	Noakhali	Hatiya	Burinchar	Birinchar bazar	Rice-aman	16	15	12/02/2005
Rajshahi	Rangpur	Badar Ganj	Gopalpur	gopalpur bazar	Pulses-masur	25	24	12/02/2005
Sylhet	Sylhet	Bianibazar	Alinagar	Alinagar bazar	Pulses-Gram	25	24	12/02/2005
Dhaka	Dhaka	Demra	Ward 47	Demra bazar	Pulser-Moong	30	28	12/02/2005
Borissal	Barishal	Wazipur	Sholak	solak bazar	Flour-Atta	10	9	12/03/2005

First Prev 1 of 1 Next Last

Figure 15: Report Generation Form

This is the form of Report Generation. When user clicks “General Report” on the main page, then this form is showed.

2.9.1.4 Form: Visual Report Generation

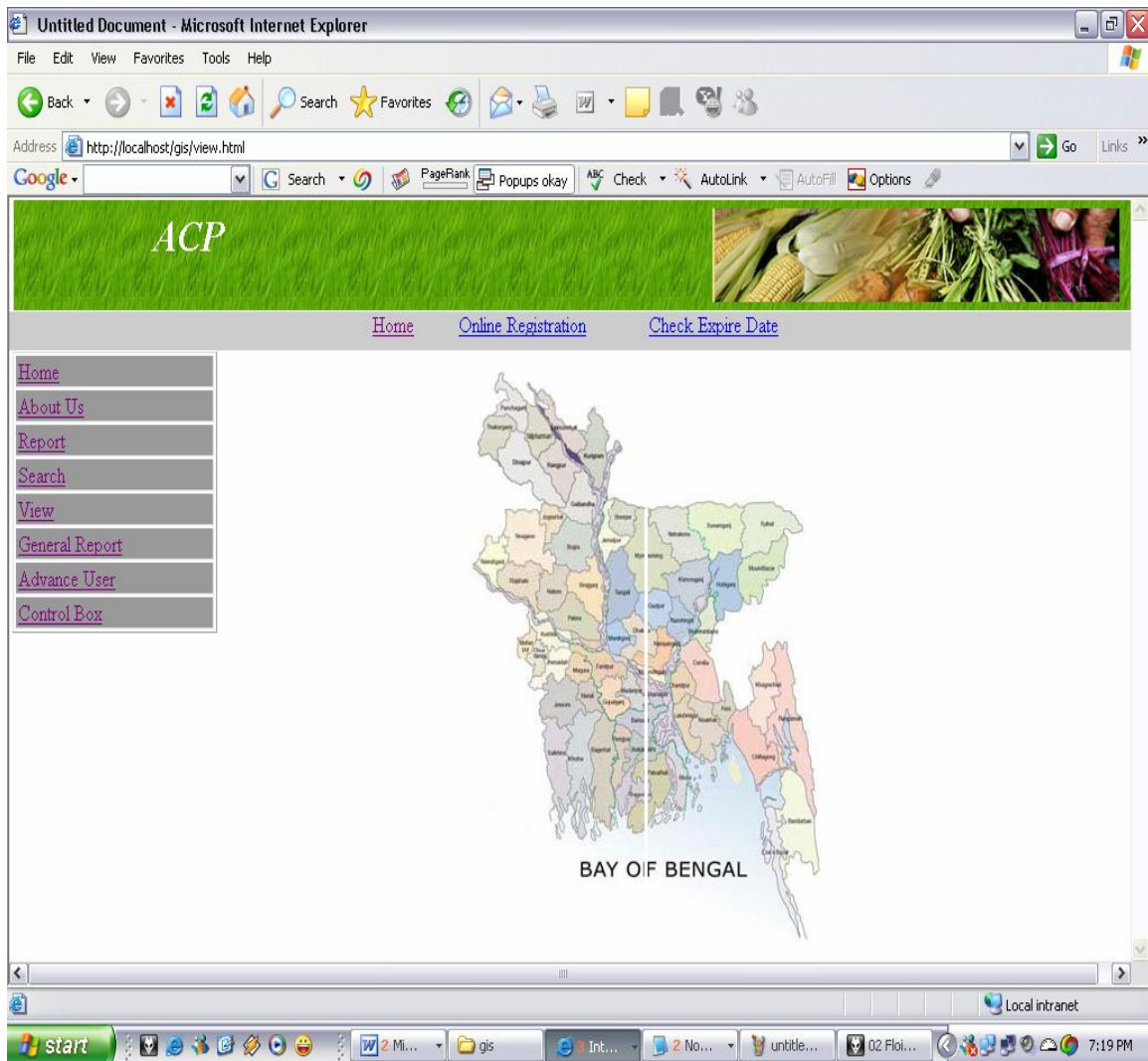


Figure 16: Visual Report Generation Form

This is the form of Visual Report Generation. User can generate report by clicking on the specific location of the map.

2.9.1.5 Form: Query System

ACP

[Home](#)..... [Online Registration](#)..... [Check Expire Date](#)

Home
About Us
Report
Search
View
General Report
Advance User
Control Box

Search By:	
	Advance Search
	Market Day
	Code
	Market
	Product

[WEBMASTER](#)

Generated with CodeCharge Studio.

Figure 17: Query system Form

This is the form where user can search for his required data. User can search by market day, by code, by market and by product. When user clicks on the specific link then the specific report is generated for that link.

2.10 SYSTEM IMPLEMENTATION:

2.10.1 System Development

The purpose of implementation is to build a proper working system. System development consists of translating previous specifications into computer programs and manual procedures.

2.10.2 Computer Programming

This general design of the program is usually documented in the form of a macro level flow chart, which depicts the major logical flow of the program. Once we have prepared the macro level chart, the detailed sequence of decisions, data movement, computations, and linkage in the program will be shown in a micro level program flow chart. This micro level chart then becoming the basis for actual coding of the program.

2.10.3 Actual coding

For coding, we used PHP as front end. In addition, for the Database we used Mysql 4.1. The reason we used this tool is because PHP is very popular server side scripting language. Also PHP is free. For choosing the database is Mysql is easily host to the web. It requires less capacity than Oracle 9i. Mysql is also free .We used apache server. In the coding phase we first decided the function names. After that the function details are decided. Each module is implemented separately.

2.10.4 Web interface

User can view all the details about maximum and minimum price of product of a specific market from the product info, market info and can generate

report according to their need. The System ensures view, search and report generation which help user to access the actual updated data according to their need.

CHAPTER III: SYSTEM TESTING

As part of the whole system my module is tested rigorously. I scrutiny my part with every possible erroneous input to check the output.

3.1 REPORT GENERATION

Reports are generated based on following database queries.

3.1.1 Database Queries

1. Show division from division list. (Fig. 18)
2. Show district from district list. (Fig. 18)
3. Show upazila from upazila list. (Fig. 18)
4. Show union from union list. (Fig. 18)
5. Show market from market list. (Fig. 18)
6. Show all products from product list. (Fig. 20)
7. Show maximum price of the product. (Fig. 15)
8. Show minimum price of the product. (Fig. 15)
9. Show market date. (Fig. 18)
10. Show market by market day. (Fig. 18)
11. Show division id. (Fig. 22)
12. Show district id. (Fig. 22)
13. Show upazila id. (Fig. 22)
14. Show market id. (Fig. 22)

3.2 SYSTEM TESTING

3.2.1 Search by market day

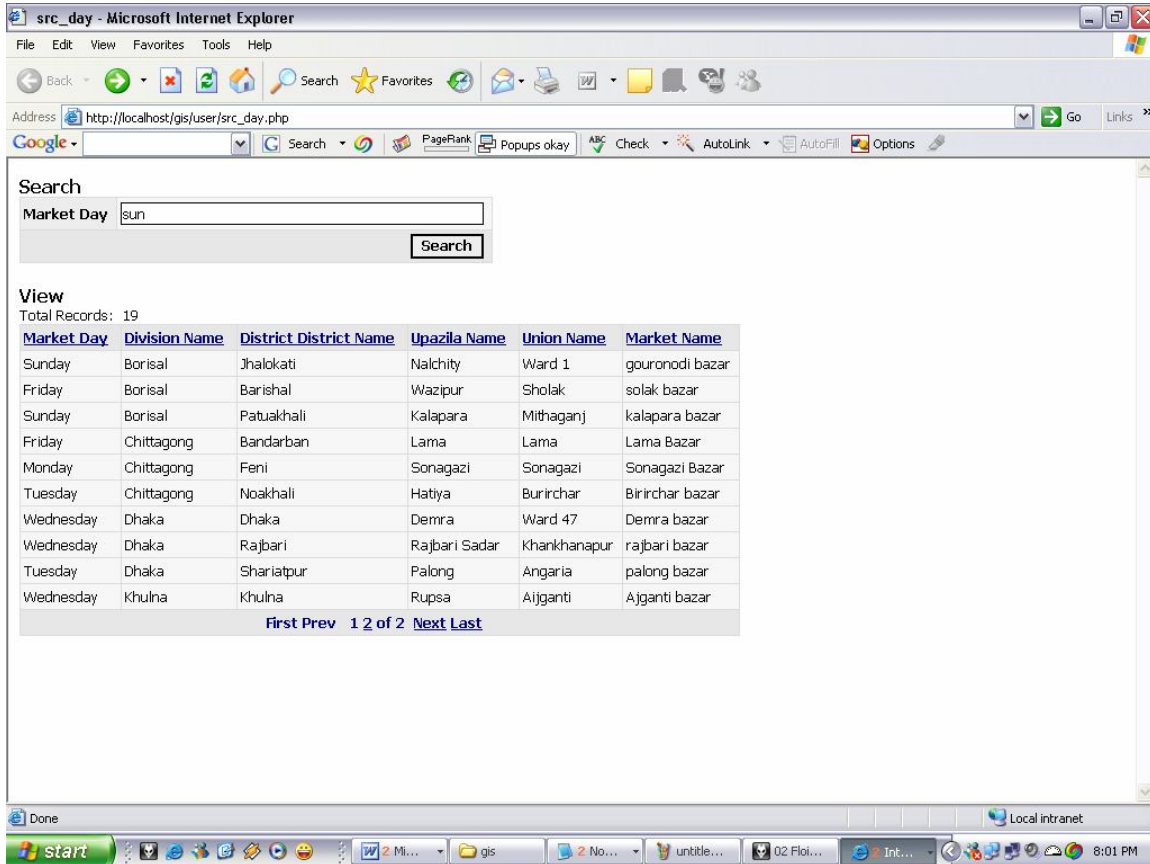


Figure 18: Search by market day

Here in the search option, the search is done by market day. Day name or partial of the day is given. Then the result will be showed.

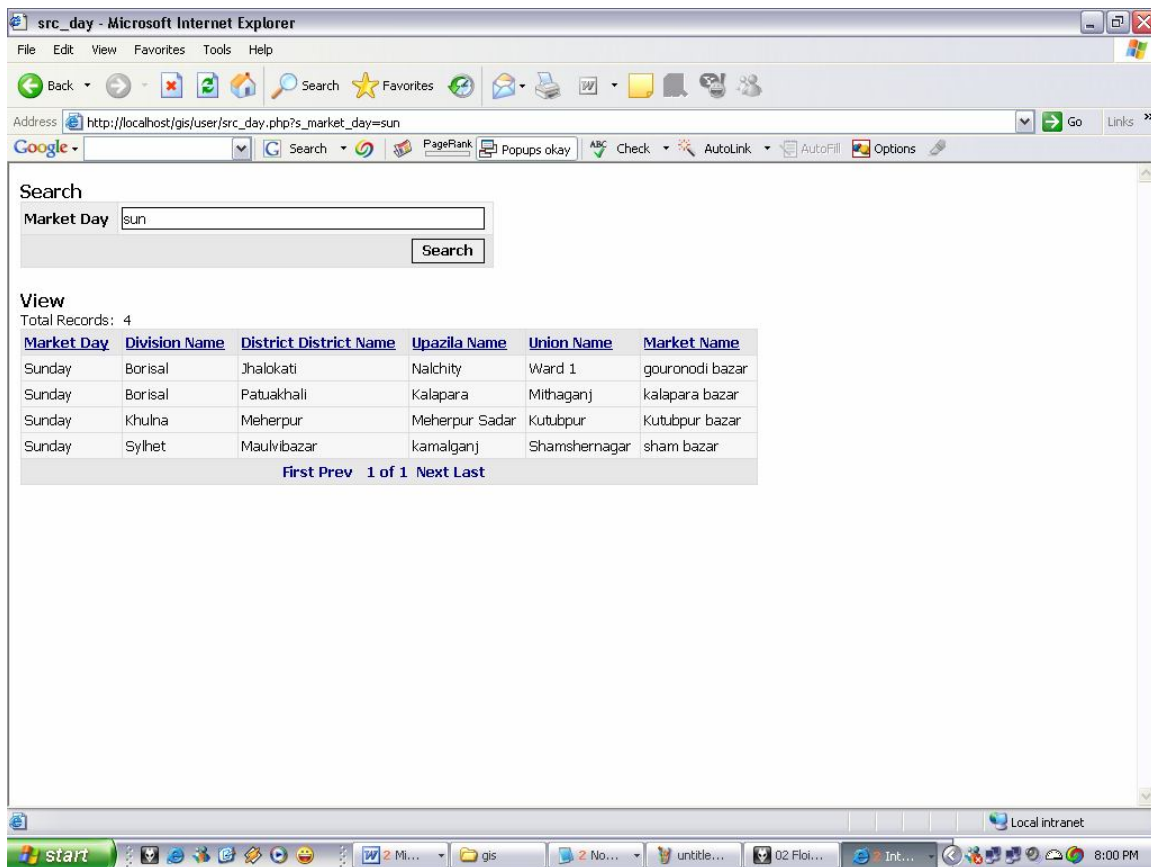


Figure 19: Search result by market day

In search option “market day” “sun” was given as search field. Then the result is shown that is queried from the database.

3.2.2 Search by product

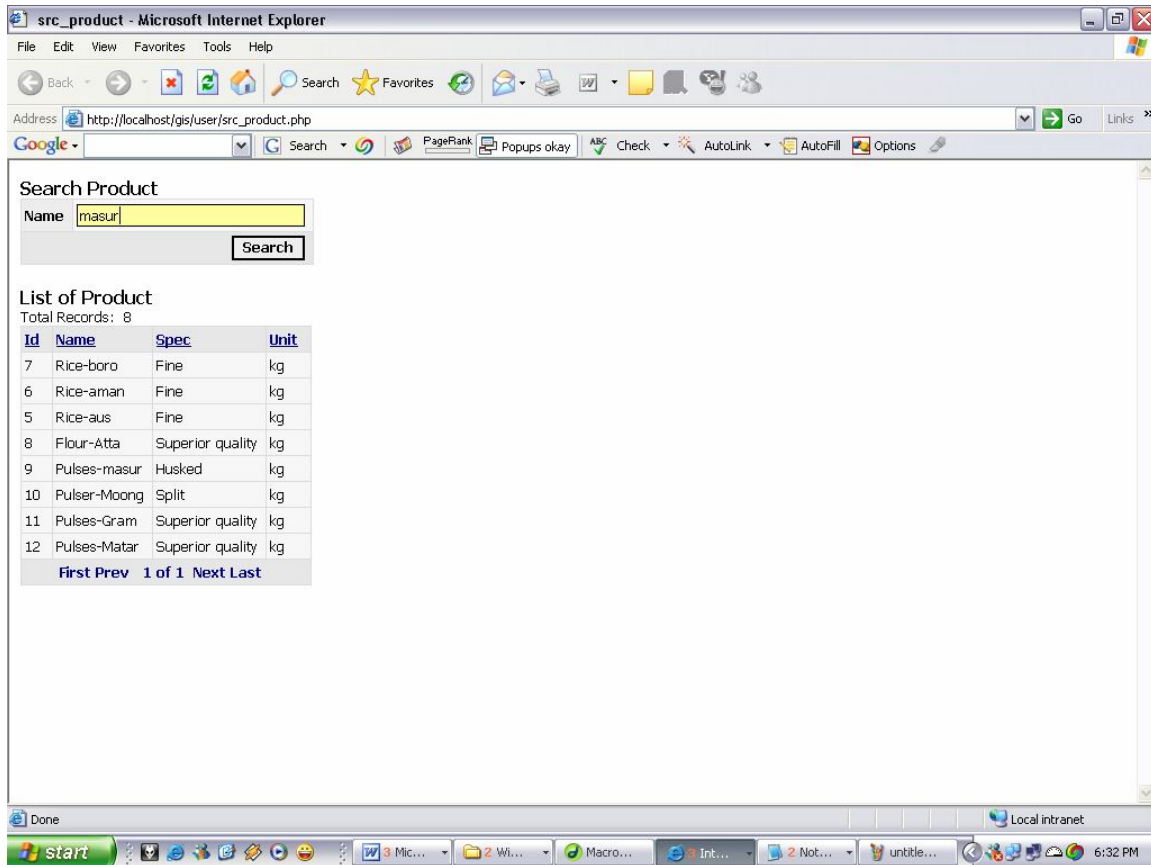


Figure 20: Search by product

Here in the search option, the search is done by product. Product name or partial of the product name is given. Then the result will be showed.

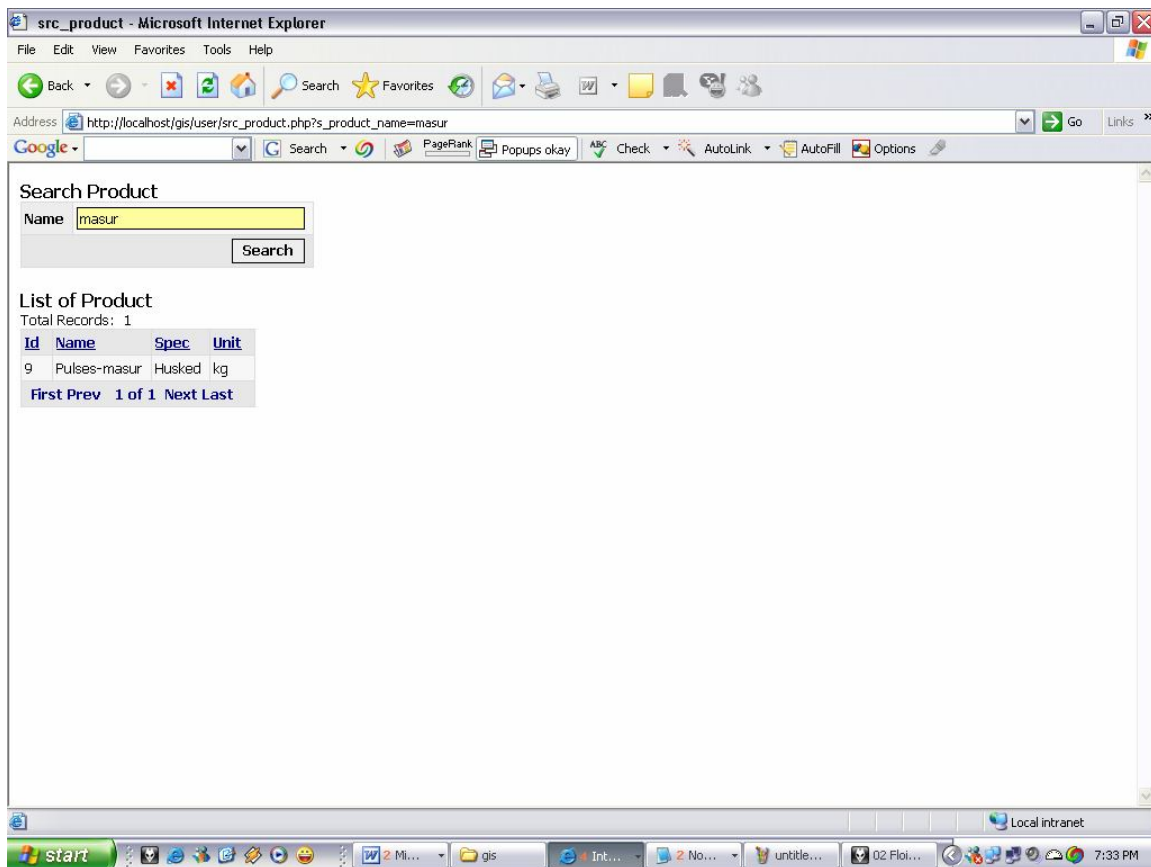


Figure 21: Search result by product

In search option “market day” “sun” was given as search field. Then the result is shown that is queried from the database.

3.2.3 Advance Search

src_adv - Microsoft Internet Explorer

Address: http://localhost/gis/user/src_adv.php

Search

Division Division Name

District District Name

Upazila Name

Union Name

Product Name

Market Day

Daily Date

Total Records: 17

Division Id	District Id	Upazila Id	Union Id	Division Name	District Name	Upazila Name	Union Name	Product Name
02	75	10108	10	Chittagong	Noakhali	Hatiya	Burirchar	Rice-boro
01	42	10104	5	Borisal	Jhalokati	Nalchity	Ward 1	Rice-aman
03	86	10111	13	Dhaka	Shariatpur	Palong	Angaria	Rice-aus
02	03	10106	8	Chittagong	Bandarban	Lama	Lama	Flour-Atta
06	90	10121	23	Sylhet	Sunamganj	Tahirpur	Tahirpur	Pulses-Matar
02	03	10106	8	Chittagong	Bandarban	Lama	Lama	Rice-aman
03	86	10111	13	Dhaka	Shariatpur	Palong	Angaria	Pulses-Gram
01	78	10105	7	Borisal	Patuakhali	Kalapara	Mithaganj	Rice-aman

Figure 22: Advance Search

In advance search user can search by any of the option. User can give full name or partial name of the searching field. He can use all keyword or any choice by his own.

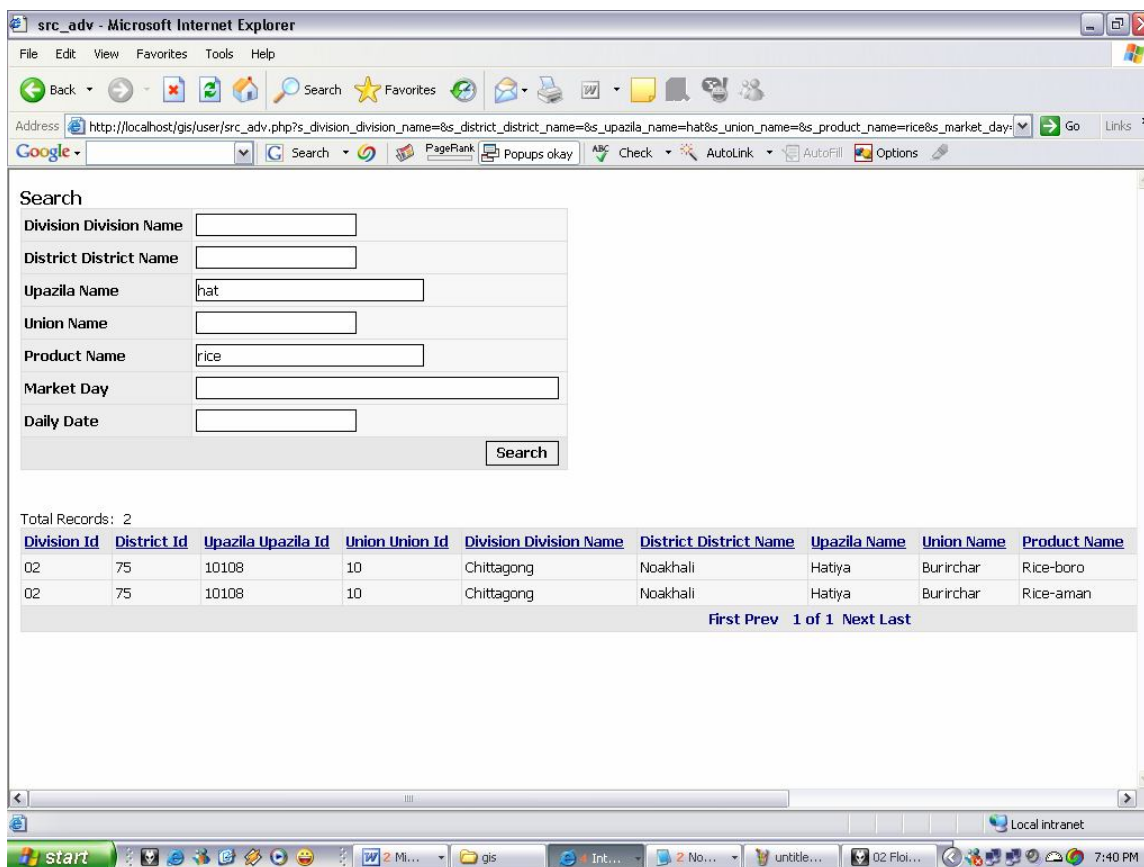


Fig 23: Search result by advance search

In advance search option “upazila name” “hat” and in “product name” “rice” was given as search field. Then the result is shown that is queried from the database.

3.2.4 Report Generation by Graphical Search

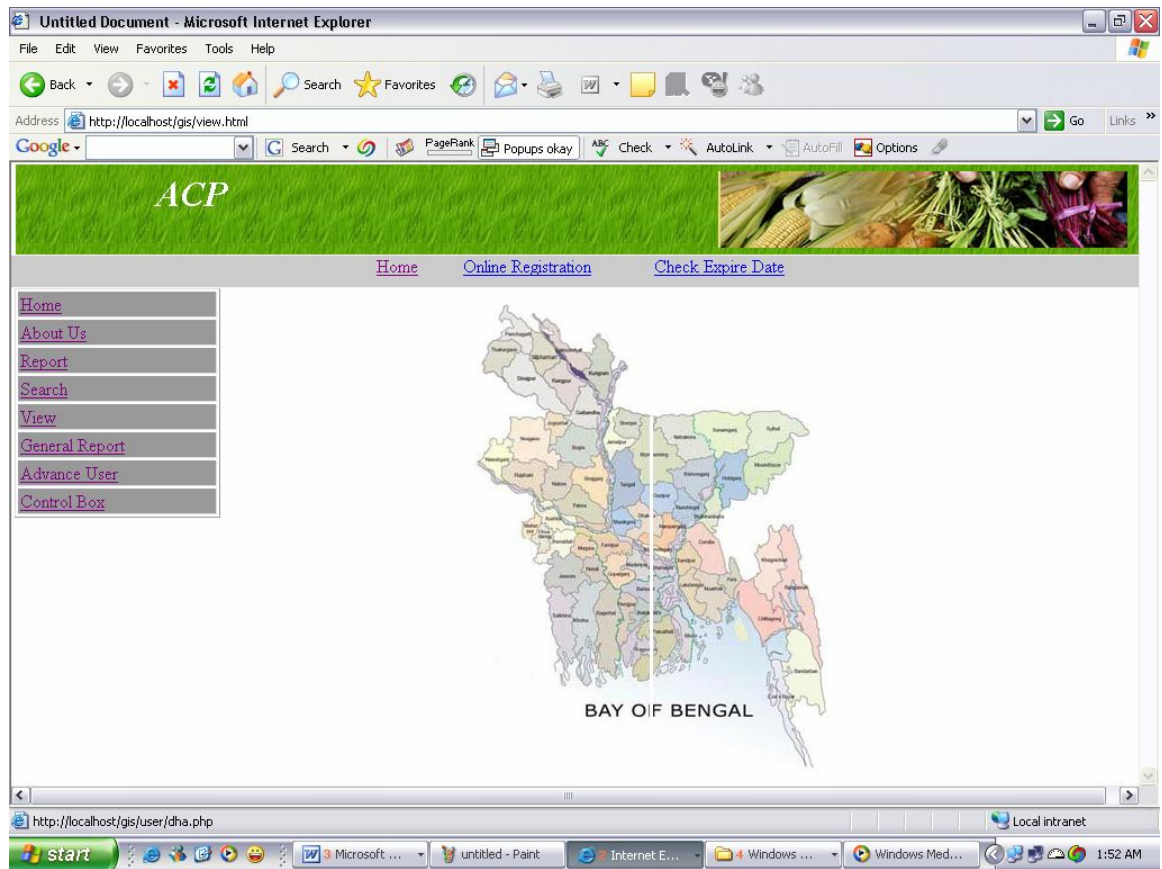
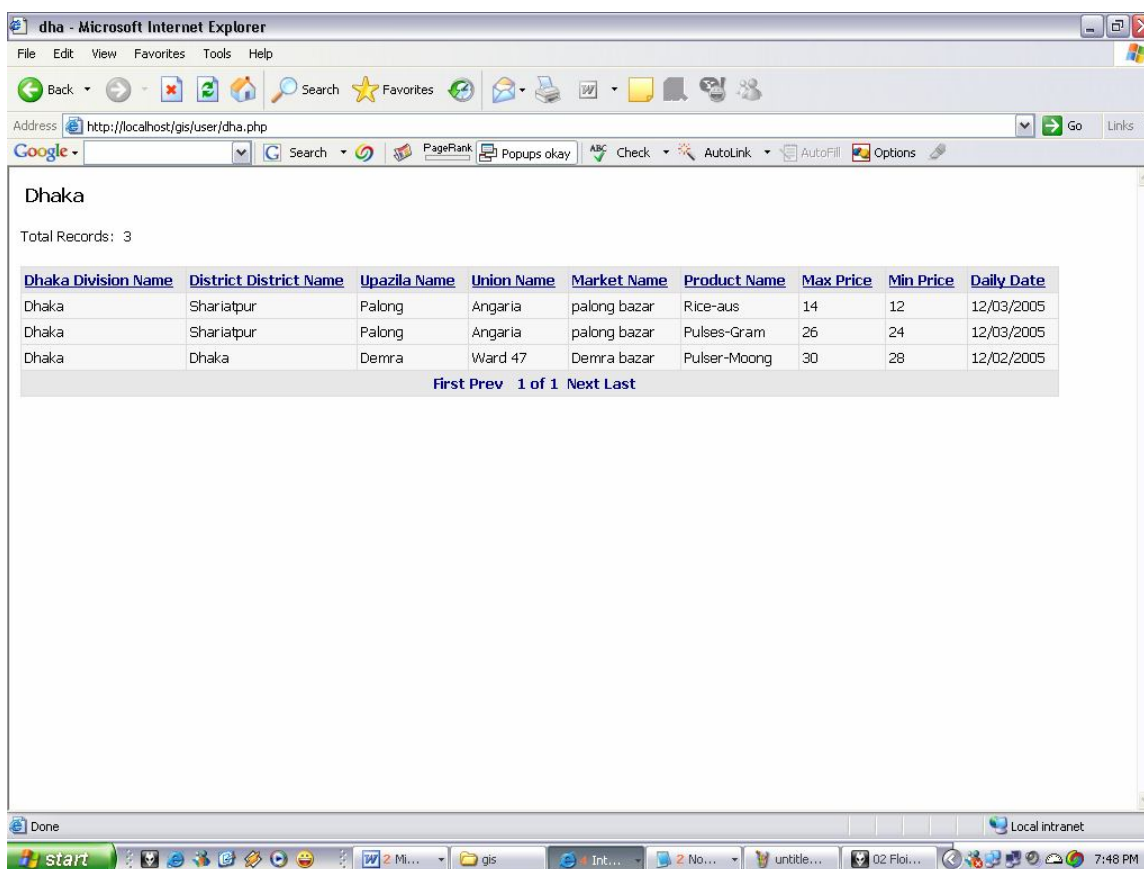


Fig 24: Search by graphically

User can also generate visual report by clicking on the desired location of the map.



Dhaka

Total Records: 3

Dhaka Division Name	District District Name	Upazila Name	Union Name	Market Name	Product Name	Max Price	Min Price	Daily Date
Dhaka	Shariatpur	Palong	Angaria	palong bazar	Rice-aus	14	12	12/03/2005
Dhaka	Shariatpur	Palong	Angaria	palong bazar	Pulses-Gram	26	24	12/03/2005
Dhaka	Dhaka	Demra	Ward 47	Demra bazar	Pulser-Moong	30	28	12/02/2005

First Prev 1 of 1 Next Last

Fig 25: Report generated by Graphical search

In visual report generation option in “Dhaka” division of the map is clicked. Then the report of Dhaka division was generated by querying the database.

CHAPTER IV: SECURITY ISSUE

Security issue is an important feature because it saves the system from being misused and damaged. The following security issue is maintained in our system.

4.1 REGISTRATION:

In this system there is option for online registration. A user can only use the entire feature of this system if he or she is a advanced user. A user who is not a paid user can be counted as a demo user and gets a period of time of 30 days to test the system and then become a full registered user. A demo user can only view the general report but he or she can not use any kind of search or advance search or visual report searching option.

4.2 AUTHENTICATION:

In this system there are four types of users. They are webmaster, admin users, advance users and demo users. Webmaster only can add or delete admin users. An admin user can add/delete product, update product information, update division, and district information. An advance user can use the whole feature of the system such as searching, advance searching, report generation and visual report generation. A demo user only can view the general report. Demo users exist for 30 days. After 30 days if demo users do not pay to become a registered user automatically the demo user is deleted from the system. We build a visual basic based program to authenticate the users. An unregistered user will not able to see any kind of information from the system.

4.3 WEB SECURITY:

The web pages are with session management. So multiple users can access the system at a time but everyone's task will not conflict with each other's. Even they are not allowed to access to other areas are not allocated for them.

CHAPTER V: LIMITATIONS OF THE SYSTEM

Due to lack of time and resource limitation some other features are not implemented some feature is not implemented with full power. Following limitations are found in the system.

5.1 ONLY PRICE BASE LISTING:

Bangladesh bureau of statistics deals with all kind of statistical data. But it is not possible for us to deal with all types of data. In our thesis work we only focused on price base system of commodity.

5.2 NO CREDIT CARD SYSTEM:

Since credit card system is not popular in our country and there is not a sound infrastructure of this system, we did not implement credit card paying system in our system.

5.3 ONLY DIVISION WISE VISUAL REPORT:

In this system only division wise visual report generate by clicking only the division names. District level and upazila level report can be implemented in future.

CHAPTER VI: FUTURE DEVELOPMENTS

User friendliness is the key to success to software. Now a day's people are coping with new technology and the system is not bind to a fixed system. It should use the tools and devices available in the market and affordable by users. Keeping this in mind the following features may be added to the system:

1. WAP technology can be implemented. Short for the Wireless Application Protocol, a secure specification that allows users to access information instantly via handheld wireless devices such as mobile phones, pagers, two-way radios, smart phones and communicators. WAP is supported by all operating systems. WAP that use displays and access the Internet run what are called micro browsers--browsers with small file sizes that can accommodate the low memory constraints of handheld devices and the low-bandwidth constraints of a wireless-handheld network.
2. With regular mobiles PDA will also be used. PDA Short for personal digital assistant, a handheld device that combines computing, telephone/fax, Internet and networking features. A typical PDA can function as a cellular phone, fax sender, Web browser and personal organizer.
3. Bangladesh bureau of statistics (BBS) can implement our web interface so that they can ensure easily accessible of updated national data to the users.

CHAPTER VII: CONCLUSION

Bangladesh bureau of statistics gather statistical data each year but their collection system is manual and it is a time consuming process. When a user needs to use their data they have to spend a lot of time to get it. So the process of accessing data takes a longer period of time and they did not get updated data.

This system is designed keeping these cases in mind. We made a web interface through which a user can get easy accessibility to updated data. This is the main purpose of our thesis.

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