POULTRY MANAGEMENT SYSTEM

CSM03-Database management system

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1 CONTENTS

2 INTRODUCTION:

A poultry farm management system designed to provide a wealth of data about chicken and egg production . The primary function of this project is to aid in the care and administration of the chicken coop. It keeps meticulous records and allows us to promptly relay information.

3 ANALYSIS OF THE EXISTING SYSTEM:

- Even if all possible steps are taken to save every user, the system still has to be managed by hand. If there is a mistake, it is likely that something will go wrong.
- Several jobs are done in a certain number of steps. There are connections between different kinds of records, such as those about feed, birds, medications, costs, expenses, incubation, and more.
- Because of this, there are a lot of problems with the way these records are handled in the current system.

4 DRAWBACK OF THE EXISITING SYSTEM:

- **Difficult in report generation** : We require more calculation to generate the report.
- **Manual control :** All the calculation to generate the report is done manually so there is greater chance to get error.
- **Time consuming** : Every work is done manually so we cannot generate report in the of the session or as per requirement and its is very time consuming
- **Lot of paperwork** : Existing system required lot of paperwork. Loss if even single register or record led to difficult situation because all the paper are needed to generate the report.

5 PROPOSED SYSTEM:

- The management of chicken farms has been computerized to make things run more smoothly.
- All the information is kept and stored in a database.
- Any questions about the farm can be answered quickly and easily.
- Most manual work has been cut down.

6 ADVANTAGES OF THE PROPOSED SYSTEM:

- **User friendly:** the purposed system is user friendly Because the retrieval and storing of data is fast and a data is maintained efficiently. moreover, the graphical user is interface is provided in the purposed system, which provide user to deal with the system easily.
- **Report are easily generated:** Report are easily generated in the purposed system so user can generate the report as per the requirement (monthly) or in the middle of the session
- **Very less paperwork:** The purposed system required very less paperwork. All the data is filed into the computer immediately and report can be generated through computer.

- **Computer operated control**:computer operated control will be there so less chance of error. Moreover, storing and retrieving of information is easy. So, work can be done spending and in time.
- **Speed**: Manual system is always time consuming .Because humans are employed to do necessary action to generate report and store records, it always is slow ,In case of computerized surely help in quickly preforming the process
- **Less space Requirement** :In the traditional system, there is a need to maintain voluminous paper file. They occupy quit a large amount of space .Moreover, there maintenance extremely difficult .our system will replace paper files and store the files electrically in the computer’s hard disk or in any other electronic storage media. These files are easy to maintain.
- **Backup facility:** the traditional system offers no backup mechanism .Natural disasters such as flood or fire many cause paper files to lose once all. However, our computerized model offers proper backup mechanism . Files stored electrically in the hard disk can be backup in secondary storage devices such as floppy disk or CR-ROM.

7 SYSTEM REQUIREMENTS:

7.1 SOFTWARE REQIREMENTS:

- ER diagram : Figjam
- Relational Schema : dbdiagram.io
- RDBMS : MySQL

7.2 HARDWARE REQUIREMENTS:

- Memory : Minimum of 512 MB RAM
- Processor: Intel (Or any Processor)
- Operating System : Windows (Preferred)
- Platform: Windows 11

8 DATA OVERVIEW:

8.1 BREED_TYPE:

In a poulty farm there will be many types of breed and each have its unique origin,dual purpose usage,special characters,special features,Weight (New born, body weight at 6 weeks, body weight at 8 weeks ,adult body weight) , medicinal usage(types and its dosage for each period of growth) ,Feed usage (types and its quantity for each period of growth), Egg Details(Incubation period,production of egg per year,average egg weight,age at sexual maturity,mating ratio),shed(where each type breed is kept).

Breed_type

Name	Origin	Dual purpose bird	Special_char	Special_features	Medicine	Feed	Egg_details	shed

Medicine →M_type_1

M_name	M_code	Nb_Dose	W6_Dose	W8_Dose	Adult_Dose

Medicine →M_type_2

M_name	M_code	Nb_Dose	W6_Dose	W8_Dose	Adult_Dose

Medicine →M_type_3

M_name	M_code	Nb_Dose	W6_Dose	W8_Dose	Adult_Dose

Egg_Details

Incubation_period	Production_per_year	Average_egg_weight	Age_at_sexual_maturity	Mating_ratio

Feed→F_type_1

F_Name	F_code	Nb_Quantity	W6_Quanitity	W8_Quanitity	Adult_Quantity

Feed→F_type_2

F_Name	F_code	Nb_Quantity	W6_Quanitity	W8_Quanitity	Adult_Quantity

Feed→F_type_3

F_Name	F_code	Nb_Quantity	W6_Quanitity	W8_Quanitity	Adult_Quantity

- Primary key : Name,M_Name,F_name
- Forgien key: Weight,Medicine,Feed.
- Participation : Partial participation
- Strong entity: Breed_type
- Weat entity: Medicine and Feed
- **Mapping cardinalities**: **One to one** :- since a particular type of breed_type is having its own attributes set .Each type of breed is having its specified dosage and quantity of medicine and feed respectively.

8.2 Feed_Stock:

Feed_stock has the derived attributes such as weight,F_type and Name.Feed_Stock is further divided into two entity set one is **Feed_consumption** which as attributes such as F_type,F_Quantity,F_shed,F_code,C_remark,C_date and the other entity is **Feed_purchase** which has a set of attributes such as F_Date,F_amount,F_quantity,F_code,F_type.

Feed_Stock

Name	**F_type**	**Weight**

Feed_consumption

F_type	F_Quantity	F_shed	C_date	C_remark	F_code

Feed_purchase

F_type	F_amount	F_Quantity	F_code	F_date

- Primary key: F_type
- Forgien key : Breed_type,Weight
- Derived attributes: Breed_type →Weight, Breed_type → Feed →F_type.
- Participation:Total participation. Each entity say purchase , consumption happens all the attributes does partcipate
- Entity type : Strong entity because without Feed stock we cannot feed as well as purchase the feed for the breed
- **Mapping Cardinalities**:

1. Feed_Stock is having **one to many cardinality**(Goes_to)with Feed_consumption because depending on the stock of the feed type only the Feed_consumption takes place. And one type of feed can be feed for more than one type of breed.
2. Feed_stock is also having **one to many cardinalitity**(Update)with Feed_consumption because Feed_consumption record has to be updated to the Feed_Stock each time in order to maintain the record.
3. Feed_Stock is having **many to one cardinality**(Update)with Feed_pruchased because many type of feed type has to be purchased (One time purchase is going to happen either on monthly basis or three months once or 6 months once depending on the stock availability)
4. Feed_Stock is having **many to many cardinality** with Income since the income source is used to pruchase diffrerent types of feed
5. Feed_stock is having **many to one cardinality** with Stock_summary since Feed_stock has to updated entire stock summary

8.3 MEDICINE_STOCK:

Medicine_stock has the derived attributes such as Weight,M_type and Name.Medicine_Stock is further divided into two entity set one is **Medicine_consumption** which as attributes such as M_type, MC_Quantity, MC_shed, M_code, M_remark, M_date and the other entity is **Medicine_purchase** which has a set of attributes such as M_Date,M_amount,M_quantity,M_code,M_type.

Medicine_Stock

Name	**M_type**	**Weight**

Medicine_consumption

M_type	MC_Quantity	MC_shed	MC_date	MC_remark	M_code

Medicine_purchase

M_type	M_amount	M_Quantity	M_code	M_date

- Primary key: M_type
- Forgien key : Breed_type,Weight,M_type
- Derived attributes: Breed_type →Weight, Breed_type → Medicine→M_type.

- Participation:Total participation .Each entity say purchase , consumption happens all the attributes does partcipate
- Entity type : Strong entity because without Medcine stock we cannot give as well as purchase the medicine for the breed
- **Mapping Cardinalities:**

1. Medicine_Stock is having **one to many cardinality**(Goes_to)with Medicine_cosumption because depending on the stock of the medicine type only the Medicine_consumption takes place. And one type of medicine can be given to more than one type of breed.
2. Medicine_stock is also having **one to many cardinalitity**(Update)with Medicine_consumption because Medicine_consumption record has to be updated to the Medicine_Stock each time in order to maintain the record.
3. Medicine_Stock is having **many to one cardinality**(Update)with Medicine_pruchase because many type of medicine has to be purchased (One time purchase is going to happen either on monthly basis or three months once or 6 months once depending on the stock availability)
4. Medicine_Stock is having **many to many cardinality** with Income since the income source is used to pruchase diffrerent types of medicine
5. Medicine_stock is having **many to one cardinality** with Stock_summary since Medicine_stock has to updated entire stock summary

8.4 BIRD_STOCK:

Bird_stock has the derived attributes Name.Bird_Stock is further divided into three entity set one is **Bird_sales** which as attributes such as B_type, BS_Quantity, BS_shed, BS_date and the other entity is **Bird_purchase** which has a set of attributes such as B_Date,B_type,B_quantity,B_shed,B_amount.And the other entity set is **Bird_mortality** which has a set of attributes such as B_type,BM_date,BM_shed,BM_quantity.

Bird_Stock

Name

Bird_Purchase

Name→B_type	B_date	B_Quantity	B_shed	B_amount

Bird_Mortality

Name→B_type	BM_date	BM_shed	BM_Quanitity	BM_remark

Bird_sales

Name→B_type	BS_date	BS_Quantity	B_shed	B_amount

- Primary key: B_type
- Forgien key : Breed_type
- Derived attributes: Breed_type → B_type.

- Participation:Total participation .Each entity say purchase , consumption,mortality happens all the attributes does partcipate
- Entity type : Strong entity because without Feed stock we cannot feed as well as purchase the feed for the breed
- **Mapping Cardinalities:**

1. Bird_Stock is having **many to many cardinality**(Goes_to)with Bird_pruchase because many type of bird has to be purchased (One time purchase is going to happen either on monthly basis or three months once or 6 months once depending on the stock availability)
2. Bird_stock is also having **one to many cardinalitity**(Update)with Bird_moratlity because Bird_Mortality record has to be updated to the Medicine_Stock each time in order to maintain the record.
3. Bird_stock is having **one to many cardinality**(Goes_to)with Bird_mortality because single type of breed can be stored in different shed and many types of breed can be died . Depending on the Bird_stock only the count of the breed alive is calculated
4. Bird_stock is having **one to many cardinality**(Update) with Bird_sales since the entire sales details has to be updated
5. Bird_stock is having **one to many cardinality** (Goes_to) with Bird_sales because depending upon the stock only the sales takes place.
6. Bird_Stock is **having many to many cardinality** with Income since the income source is used to pruchase diffrerent types of birds
7. Bird_stock is having **many to one cardinality** with Stock_summary since Bird_stock has to updated entire stock summary

8.5 EGG_STOCK:

Egg_stock has the attribute E_type.Egg_Stock is further divided into three entity set one is **Egg_sales** which as attributes such as E_type,E_sold,ES_remark,E_date,E_amount and the other entity is **Egg_production** which has E_Incubated,E_type,E_date,E_discarded,E_broken,E_remarks as its attributes. And the other entity set is **Incubation_chart** has a set of attributes such as E_type,No_eggs,No_infertile,No_fertile_eggs,No_infertile_eggs,No_of_dead_shell_eggs,No_weak_chicks,No_good_chicks,Total_chicks_hatched.

Egg_Stock

E_type

Egg_production

E_type	E_Incubated	E_date	E_Discarded	E_broken	E_remarks

Incubation_chart

E_ type	No_eggs	No_infertile_ eggs	No_fertile _egg	No_dead _shells_ eggs	No_weak _chicks	No_good _chicks	Total_chicks _hateched

Egg_sales

E_type	E_date	E_Sold	ES_remarks	E_amount

- Primary key: E_type
- Forgien key : Breed_type
- Participation:Total participation .Each entity say purchase , consumption,sales happens all the attributes does partcipate
- Entity type : Strong entity because without Egg stock we cannot incubate,sale as well as purchase the bird.
- **Mapping Cardinalities:**

1. Egg_Stock is having **one to many cardinality**(Update)with Egg_produciton because Egg_production record has to be updated to the Egg_stock each time in order to maintain the record.
2. Egg_stock is having **one to many cardinality**(Goes_to)with incubation_chart because single type of egg can be incubated to hatch some other type is not required to be hatched .
3. Egg_stock is having **one to many cardinality**(Update)with incubation_chart because it needs to be consistenly updated in the Egg_stock.
4. Egg_stock is having **one to many cardinality**(Update) with Egg_sales since the entire sales details has to be updated
5. Egg_stock is having **one to many cardinality** (Goes_to) with Egg_sales because depending upon the stock only the sales takes place.
6. Egg_Stock is **having many to many cardinality** with Income since the income source is used to pruchase diffrerent types of birds
7. Egg_stock is having **many to one cardinality** with Stock_summary since Bird_stock has to updated entire stock summary

8.6 INCOME:

Income has two aids which are Govt_aid and Sales_income.

Income

Govt_aid	Sales_income

- Primary key: Govt_aid,Sales_income
- Participation :Total participation
- Entity type: Strong entity
- Mapping cardinality:

1. It has **Many to many** cardinality with Feed_pruchase,Medicine_pruchase,Bird_pruchase since the many source of income is utilized to buy the feeds,medicines and birds
2. It has **Many to one cardinality** with Income from Egg_sales and Bird_Sales since the sales might happen with any type of breed and egg.

8.7 STOCK_SUMMARY:

Stock_summary is the whole stock summary of Feed_stock,Medicine_stock,Egg_stock,Bird_stock.

Stock_summary

Feed_stock	Medicine_Stock	Egg_stock	Bird_stock

- Primary key: Feed_stock,Medicine_stock,Egg_stock,Bird_stock.
- Partcipation: Total participation
- Entity type: strong entity
- Mapping cardinality:

1. It has **many to one cardinality** with Feed_stock,Medicine_stock,Egg_stock,Bird_stock since each stock has its own entity set.