

Scenario of Khamar Bari

In many farms of Bangladesh, it is very difficult to maintain animals' requirements for farming system maintenance. "Khamar Bari" is a digital system that can maintain and monitor farms and animals in real time. To run the system in fully operational, the user: manager, can log in to the system and monitor the statistics of all the attributes of the system i.e. Farms, Farm Heads, Employees, Animals, Animals health and animal foods.

Farms will have attributes of the total area of the land occupied by that farm, the type of animal it contains, and the total number of animals that is categorized by the following animal sub type, for example, under the animal 'Chicken' will have all types of chicken that the farm contains i.e. Deshi chicken, Broiler chicken, etc.. This means that each farm will contain only one type of animal: it is divided into subtypes. There will be a quarantine section in the farm where sick animals will be placed for medical diagnosis. A farm is run by the branch manager and each farm is operated by only one branch manager. Without a branch manager, a farm cannot be operational.

The CEO needs to enrol a farm and a branch manager and assign him/her to that farm that includes employees, animals, animal medicines, of that farm. Various statistical attributes will be shown to the CEO of farms once he/she is logged in to the system. This statistics includes total animals sold against bought, animal health, deaths and sick animals and sick animals treated. The CEO can also replace or fire a branch manager and employee/s of any farm. A Farm can also be deleted by the CEO.

The branch manager can enrol new employees, animals, and animal foods. For enrolling animals, animals can be identified individually if the animal size is big enough. Since the system is going to manage only 3 specified animals i.e. Cows, chickens and ducks (that includes calf, baby chickens and ducklings). Moreover, the job of the branch manager is to guide and monitor employees that are working on the following farm. Farm heads can also see various information of other farms like the farm's attributes. Branch managers can enrol, view, update and delete an employee, food of animals of the following farm, animals and quarantined animals.

This system consists of five modules. These are-

1. **Registration and Login:** Users like branch managers are enrolled by the CEO and they can later login and perform their role and change necessary attributes of the firm.
2. **Generate Statistical Graph:** Various statistics are shown in different forms of graphs for animals.
3. **Creating a farm:** Creating a farm requires farm land area, location, animal type that it holds and a branch manager.
4. **Moving animals from one farm to another:** Animals can be moved from one farm to another by farm managers.
5. **Managing Quarantined animals:** Animals that are quarantined are either moved to the main farm if recovered or kept there until not.

Registration and Login:

1. **Creating a branch manager account:** The farm manager account can be created by only the CEO. By filling up the necessary fields of the farm manager, the farm manager account can be created.
2. **Creating an employee account:** Employee accounts can be created by the farm managers only if they are already assigned to a farm. Only farm managers can enrol, update or delete employees of the assigned farm.
3. **Logging in to account:** Depending on the account type, a user can log in to his/ her account by providing account id and password. Only CEO and farm manager can log in to “Khamar Bari”.

Generate Statistical Graph:

Different figures are shown in different ways of animal graphs. Some of the statistics include: Healthy Animals, animals that are up for Sale and animals that are sick. As an optional.

Creating a farm:

This is one of the main operations of the system. Creating a farm will allow the CEO to insert animals into it and make it fully functional after enrolling a branch manager to it. Building a farm requires a farm area, land, type of animal species and a branch manager. A farm can also be deactivated if it is non-operational or deleted once it can no longer service. Before deactivating or deleting, all the contents of the farm (animals, animal foods and animal eggs) are needed to be transferred elsewhere such as on another farm.

Moving animals from one farm to another:

Sometimes animals need to be moved for any reason and this can be done by selecting the animals by their tag numbers if the animal type is cow, or by numbers if it is not. Animals that are needed to be moved are selected by the farm manager of that farm and the farm manager, of the designated farm that the animals will be moved to, will manage spaces for the upcoming animals.

Managing Quarantined animals:

When animals are sick, they are moved away from the healthy animals as a precaution to minimize the risk of spreading harmful diseases. Once an animal is detected ill, it is then sent to a section already reserved in the farm for keeping unhealthy animals.

Once the animals are treated and cured, they can be transferred to the main section of the farm again.