**The Big Farm**.

The farmer needs to expand his business to new types of birds.

From now on the farmer will be able to buy and sell Chickens, Ducks and Turkeys.

All these birds can be male or female and have four stages of maturity life cycle. (egg, young, mature, old).

The Chicken egg take between 2 and 5 days to hatch if its inseminated, consume no food and have a 70% chance to be female.

The Young Chicken take between 4 and 8 days to become mature, consume 200g of food per day and can’t lay eggs.

The Mature Female Chicken take 25 days to become old, consume 350g of food per day and lay 3 eggs per day. The egg is inseminated only if the female has an active male Chicken in the farm.

The Mature Male Chicken take between 30 and 35 days to become old, consume 400g of food per day and can be active for up to 8 female Chickens.

The Old Chicken take between 10 and 11 days to die and consume 200g of food per day.

The Duck egg take between 5 and 7 days to hatch if its inseminated, consume no food and have a 50% chance to be female.

The Young Duck take between 6 and 9 days to become mature, consume 250g of food per day and can’t lay eggs.

The Mature Female Duck take 30 days to become old, consume 450g of food per day and lay 1 egg every 3 days. The egg is inseminated only if the female has an active male Duck in the farm.

The Mature Male Duck take between 37 and 40 days to become old, consume 500g of food per day and can be active for up to 1 female Duck.

The Old Duck take between 12 and 15 days to die and consume 250g of food per day.

The Turkey egg take between 8 and 10 days to hatch if its inseminated, consume no food and have a 40% chance to be female.

The Young Turkey take between 10 and 12 days to become mature, consume 550g of food per day and can’t lay eggs.

The Mature Female Turkey take 45 days to become old, consume 600g of food per day and lay 2 egg every 9 days. The egg is inseminated only if the female has an active male Turkey in the farm.

The Mature Male Turkey take between 46 and 50 days to become old, consume 650g of food per day and can be active for up to 1 female Turkey.

The Old Turkey take between 22 and 25 days to die if female, and 30 to 33 if male. and consume 350g of food per day.

The Farmer also needs to export a new and more complex report to an Excel file.

The minimum data needed to complete the file:

* Number of animals alive right now it the farm, grouped by type, gender and maturity cicle.
* Number of Eggs laid and hatched in the last 7 days, grouped by type.
* Number of dead animals in the last 7 days, grouped by type.
* Number of transactions for the last 7 days, grouped by type of animal.

For the moment the prices for each animal are static:

* Egg (buy: 100 – sell:20)
* Young (buy: 130 - sell: 30)
* Mature Female (buy:150 - sell: 45)
* Mature Male (buy: 135 - sell: 35)
* Old (buy: 30 - sell: 5)
* Food (5 x 1000g)