# *Assignment 1 –Happy Valley Kennels Business Rules; Project Roles*

Date assigned: Tuesday, August 30, 2016

Date due: **Friday, September 9, 2016 – No late assignments accepted**

**Learning Objectives**

Upon successful completion of this assignment, the student will be able to:

* Identify and discuss various project roles
* Determine the business rules for the HVK system.

To do:

**Create a document called YourUserId\_E11\_A01\_Business\_Rules.docx, and save it in the Assignment folder in the 420-E11 folder in your H drive.**

**Part A – Project Roles (to be completed individually)**

1. Compare and contrast the role of a systems analyst, business analyst and infrastructure analyst.
2. System Analyst: Systems Analysts determine how to implement solutions to the system. They will be the ones designing the systems. They’re the bigger picture problem solvers.
3. Business Analyst: The business analyst determines how a system will provide business value. They define what the customer needs/wants.
4. Infrastructure Analyst: The infrastructure analyst makes sure that the system conforms to standards to ensure that it fits together with other systems within the organization.
5. Search for open **analyst** positions in the National Capital Region or throughout Quebec. You can use any job boards you like to find the positions.

Select one analyst position that is of interest to you. For each position:

1. Include the link to the position

<http://jobview.monster.ca/v2/job/View?JobID=171131621&MESCOID=1300087001001&jobPosition=14>

1. Summarize the skills and experience required for the job.

From the sounds of it, the job is based on exactly what we learn in our systems and database classes. MXI is migrating their data from legacy systems to newer ones, so they need people to do that. The skills required for the job are knowing the ETL process, knowing about validation, assessing data quality, assessing risks in migrating certain data, know about developing data models, working with customers to determine their needs and writing PL/SQL scripts.

1. How do these skills compare to the ones we discussed in class?

These skills are literally what we learn in systems and databases. We learn a lot about validation in web II in the context of forms and I suspect we’ll be doing a lot more of it in future database courses. We learned about data integrity in business information system and again, will be learning more about that in the future. We learn to develop data models in class and writing SQL scripts. We’re even learning now about developing user stories, which seems to be a part of the job. The class is very oriented towards exactly what we’re doing in the two classes.

1. What would you need to do to get this job? Different education? Experience? Be specific.

Mostly what I’d need to get the job is to finish the program at Heritage so I’d actually have all the skills required. They also ask for a university degree in Computer science, engineering or another related field, but my plan is to go to university after this. They also ask for at least 2 year’s work experience, which obviously I don’t have, so I’d need that too.

1. In your opinion, should software developers also be testers? Explain why or why not.

Software developers should be testers. They’re the people who are most familiar with the code that’s been written and code should be tested while getting written. The two process should occur asynchronously. I don’t think that necessarily means there’s no need to have testers however. While developers may be testing smaller details of the program, that they’re working on, I think testers are important to play around with the program as a whole to test efficiency and usability. Test it as a product and not specific functionalities. I think there needs to be testing on the developer side for sure, but testers are still needed.

**Part B – Business Rules – To be completed individually**

1. For each of the following business rules determine if it is a Structural Assertion (Term), Structural Assertion (Fact); Action Assertion or Derivation. **Briefly explain why**.
   1. The total tax is the sum of the provincial sales tax, the Goods & Services Tax and the hidden agenda tax.

* Includes the calculation of a sum, so it’s a derivation.
  1. A car cannot be handed over to the customer unless a provisional charge has been accepted against the customer's credit card.
* Structural Assertion (Term)- something else must be done before this rule. The term for the car being handed over is that they have a provisional charge that’s been accepted against the customer’s credit card.
  1. Rental charge is based on base rental price, optional insurances, and refueling charge
* Action Assertion. The rule doesn’t contain the calculation itself, it just says that those are the terms for finding the rental charge. It doesn’t say what to do with any of those numbers.
  1. The branch inventory of a car model is composed of the cars of that model owned by the branch.
* Structural Assertion (Fact)
  1. Rental charge = Base rental price + Optional insurances + Refueling charge
* Includes some sort of calculation, so it’s a derivation
  1. A branch may be the car gainer in a transfer.
* Structural Assertion (fact) – I’m not actually entirely sure what this means, but it sounds like a structural assertion
  1. A rental branch manager is an employee.
* Action assertion. It’s a fact.
  1. A car must have a registration number.
* Action assertion. It’s a fact
  1. A credit account customer must be at least 18 years old.
* Structural assertion (Fact) – it’s not an action assertion because it has a dependency, but it’s not a term because nothing needs to happen before someone can become a credit card customer. Being 18 is a prerequisite, not something you can just go an do.
  1. An account may be closed only if the current balance is zero.
* Structural assertion (Term) – the account balance must be zero before anything else.
  1. The 'rental amount' in Rental is calculated from the Rental 'rental rate' multiplied by its ‘number of days.’
* Includes some sort of calculation, so it’s a derivation
  1. Maximum credit limit is $5,000.
* Action assertion. It’s a statement
  1. Dogs are kept in runs.
* Action assertion. It’s a statement, no condition or anything.
  1. When three or more pets are boarded from the same customer at the same time, a discount of 7% is applied to the total cost of the stay.
* Includes some sort of calculation, so it’s a derivation

1. For each of the following determine if the rule(s) is/are well worded business rule(s). If not, change it to be a well written rule (or series of rules). If you need to make assumptions, state the assumptions (but make sure they are reasonable).
   1. A customer without credit clearance must be considered as cash-only.

* This business rule works. Who doesn’t have credit clearance? How it that defined though? What determines who does or doesn’t have credit clearance?
  1. The payment period allowed must never be greater than 60 days for any customer.
* This is a good business rule. It’s very straightforward and there’s no loopholes in it.
  1. A Party is defined as high worth if it is a VIP, has a current balance of at least $5,000, or has held an account for more than 8 years.
* This is an okay business rule. Who is a VIP needs to be something that’s been defined beforehand, so maybe who is a VIP should be a business rule itself, but otherwise it’s not bad.
  1. A withdrawal from an account may be made only if the account is active and the account balance is greater than zero.
* This is an okay business rule. It’s very clear what it’s permitting, but it’s also kind of pointless. It’s pretty self-explanatory that you can only withdraw if you have money in the account or if the account is active.
  1. A branch manager may approve a loan only if the value of the loan is less than $10,000.
* This is a good business rule. A branch manager is a specified person and the loan amount is specific.
  1. A Party with 6 successive defaults must not be offered a new loan exceeding $5,000.
* What are defaults? The rest of the rule is fine, but what does it mean by a default?
  1. A customer with an overdrawn account may make only cash transactions.
* This is a good business rule. Someone who has nothing in their account has to pay in cash. Makes sense.
  1. Contacts with high-value customers must be recorded.
* What is a high value customer? This has to be something that’s been defined.
  1. A new account must be approved by at least two managers in the final quarter.
* Two managers of what level? A lot of people are managers. Can a manager in the IT department approve the opening of a new account?
  1. Update the account current balance by adding the new deposit amount when received.
* This isn’t a bad business rule, but it’s quite poorly worded. It’s reword it as: “Whenever a new deposit is received, it’s added automatically to the current account balance”.
  1. The account current balance is defined as the previous balance plus the amount of the new deposit.
* This is an okay business rule. It doesn’t make any assumptions, but it could be worded a bit better. I’d word it as “The new account balance is equal to the current amount, plus the deposit amount.”

1. Extract and list the business requirements from the following paragraphs. If there is information missing that prevents you completing the requirements, list questions that you need to ask to determine that missing information.
   1. All Users shall be able to logout of the system. For all Administrators the system shall automatically monitor these securely identified Users for inactivity. If there is inactivity for more than (>) 30 minutes, the system shall automatically log these Users out of the system.

* Users must be able to log off.
* Who are administrators? How are they identified? ACL? What are they monitoring?
* The system will log off users who have been inactive for more than half an hour automatically
  1. Using the manual form or in front of the client the Practitioner creates a new File in the system. Each file is given a number once all the minimum information is entered. Once the file is saved more information can be added to it. A record of all changes to the file is maintained and can be recalled by the Practitioner in charge or the file or by any Manager. A file can be printed at any time. Once the file is opened successfully it may be closed by any Practitioner. Clients are not allowed to created files for themselves.
* The practitioner can create a new file in the system
* Once the required information is filled in, a file is given a unique number.
* Once the file is in the system, it can still be edited.
* When a file is edited, all changes are saved in log files.
* The system change log files are accessible by the practitioner and any manager.
* A file can be printed at any time.
* Once a file has been opened, it can be closed by a practitioner.
* Clients are not allowed to create files for themselves.

Clients can’t create files for themselves, but can a client make a file for a friend?

That wording leaves things open for interpretation.

**Part C – Business Rules – To be completed as a group**

**Create a document called YourGroupName\_E11\_A01\_Business\_Rules.docx, e.g. Group1\_E11\_ A01\_Business\_Rules.docx, and save in the Assignment folder in the 420-E11 folder in your H drive.**

Using the criteria discussed in class and the initial interview documentation, the class will develop the initial set of Business Rules for the HVK system. You have been broken into groups for this portion of the assignment (the same groups as in your database class). Each group is responsible for converting the HVK Case Study into a complete set of business rules. The first page of the case study was done with you during lab 2, so use that as your starting point.

Kennel card business rules:

1. Each kennel contains a kennel card.

2. Each kennel card must contain the pet owner’s name.

3. Each kennel card must contain the pet owner’s address

4. Each kennel card must contain the pet owner’s phone number

5. Each kennel card must contain the pet’s name

6. Each kennel card must contain the pet’s breed

7. Each kennel card must contain whether or not the pet is spayed

8. Each kennel card must contain the pet’s sex.

9. Each kennel card must contain the pet’s preferred food.

10. Each kennel card must contain the pet’s medical information.

11. Each kennel card must contain the pet’s required medication.

12. Each kennel card must contain the name of the pet’s vet.

13. Each kennel card must contain the vet’s phone number.

14. If the owner has any other pet’s in kennel, they must be on the kennel card.

15. Each kennel card has a section for notes.

Kennel log business rules:

1. Each entry in the kennel log contains the pet’s name.
2. Each entry in the kennel log contains the owner’s name
3. Each entry in the kennel log contains the pet’s preferred food.
4. Each entry in the kennel log has the pet’s feeding requirements.
5. Each entry in the kennel log has the services required for the pet.
6. Each entry in the kennel log has any medicine the pet requires.
7. Each entry in the kennel log contains the number for the run
8. The number of times a day the dog should be let out is recorded on the kennel log.
9. Each entry in the kennel log says if the dog is fed in the morning.
10. Each entry in the kennel log says if the dog is fed in the evening.
11. Each entry in the kennel log determines if the dog should be fed in the morning depending on what time it was brought in at.

Dog run business rules:

1. The kennel has 40 runs.
2. The kennel has 32 uncovered runs.
3. The kennel has 8 covered runs.
4. The kennel has 20 runs facing the back of the property.
5. The kennel has 20 runs facing the front of the property.
6. All covered runs face the back of the property.
7. There are 16 runs for large dogs.
8. There are 8 large runs facing the back of the property.
9. A dog run can be marked as available.
10. A dog run can be marked as reserved.
11. A dog run can be marked for cleaning.
12. A dog run can be marked for repairs.
13. A climbing dog must be placed in a covered run.
14. Barking dogs must be placed in a run facing the back of the property.
15. Pets must be assigned to a run marked as available.
16. Multiple dogs from the same owner can be placed in the same run.

Invoice business rules:

1. The invoice has the date submitted at the top.
2. The invoice has a unique identifier at the top.
3. The invoice contains the pet owner’s name.
4. The invoice contains the pet owner’s address
5. The invoice contains the pet owner’s phone number.
6. The invoice contains the start date of the reservation.
7. The invoice contains the end date of the reservation.
8. The invoice contains the number of days the dogs was staying.
9. Boarding for a small dog is 10$ a day.
10. Boarding for a medium dog is 11$ a day.
11. Boarding for a large dog is 12$ a day.
12. Walks for a small is 2$ a day.
13. Walks for a medium is 3$ a day.
14. Walks for a large is 4$ a day.
15. Grooming for a small is 2$ a day.
16. Grooming for a medium is 3$ a day.
17. Grooming for large is 4$ a day.
18. Administering medication for a dog is 1$ a day.
19. Playtime for a dog is 2$ per day.

Discounts business rules:

1. If the owner brings in their own food for a big dog, they get a 10% discount on the daily boarding cost.
2. If the owner has two dogs sharing the same run, they get a 10% discount on the daily boarding cost.
3. If the owner brings in 3 or more dogs, they 7% discount on the total price, before tax.

Services business rules:

1. A dog owner can pay to have their dog given a daily 20-minute walk.
2. A dog owner can pay to have their dog given daily playtime with other dogs.
3. A dog owner can pay to have their dog administered medication daily.

Reservation business rules:

1. A reservation can be made by phone.
2. A reservation can be made in person.
3. A reservation can be made online.
4. A dog can only be admitted if their vaccinations are up to date.

|  |  |
| --- | --- |
| **Group Name** | **Team Members** |
| Group 1 | Cody, Martin, Nathan |
| Group 2 | Jeremy, Philip, Alex B |
| Group 3 | Vann, Andrew, Brian, Max |
| Group 4 | Amir, Alex S, Brae |
| Group 5 | Louis, Thomas, Chris, |

Remember to number each business rule. Also split the business rules into logical units. Make a separate section for business rules that apply to the business, but may not apply to the system. Do not worry about defining terms. Assume that terms such as run, dog and kennel are understood by the business.

**Marking Scheme**

|  |  |
| --- | --- |
|  | Marks |
| Part A Question 1 – Project Roles | 6 |
| Part A Question 2 | 6 |
| Part A Question 3 | 3 |
| Part B Question 1 – Business Rules | 14 |
| Part B Question 2 | 11 |
| Part B Question 3 | 10 |
| Part C – HVK Business Rules | 50 |
| Organization/English | 5 |
| Total | 105 |

**To submit**

Part A and B should be uploaded to Moodle (**YourUserId\_E11\_A01\_Business\_Rules.docx).** In addition, one member of the group should upload the HVK Business Rules to Moodle.