**Chapter 4b - Review Questions**

1. **What are three types of sampling, and why would you use them?**

* The three types of sampling are:
  1. Systematic Sample – Would select for example every fifth customer to get feedback on a system or satisfaction
  2. Stratified Sample – Would select five customers from each of four different zip codes to ensure feedback is balanced geographically.
  3. Random Sample – Would be used if you were looking for feedback from any five customers regardless of their location, etc.

1. **What is the Hawthorne Effect? Why is it significant?**

* The Hawthorne effect says that productivity in the workplace seemed to improve whenever workers knew they were being observed, regardless of whether work conditions were good or bad. This was based on a study from the 1920s for Western Electric. The reason that this is important is that when people are observed, they tend to be on their best behavior. People tend to follow guidelines more closely if they feel they’re being watched. This could skew results of an investigation due to the fact that you would not be getting a true representation of how processes and procedures actually work in this field.

1. **What is a functional decomposition diagram (FDD) and why would you use one? Explain how to create an FDD.**
   * A functional decomposition diagram (FDD) is a top down representation of a function or process. An analyst can use an FDD to model business functions and break them down into lower-level functions and processes. Creating an FDD is like drawing an organizational chart where you start at the top and work your way down. This process can help an analyst understand how things work at different levels and how proposed changes could affect different departments or processes throughout.
2. **What are agile methods, and what are some pros and cons of this approach?**

* Agile methods are an attempt to design a system step by step using prototypes and constantly redesigning them based on user feedback and requirements. It emphasizes continuous feedback and each step evolves based on what was learned from the previous one until a final product is developed. Agile methods are very flexible and efficient at dealing with changes along the design path. Frequent deliverables can reduce risk and constantly validate results. The drawbacks of this methodology are that members need a high level of technical knowledge and very good communication skills for it to work. The lack of structure and documentation can introduce additional risks to the process. Also, due to the fluid nature of this process, the whole project could take on an entirely different aspect than what was originally intended.

1. **To what three different audiences might you have to give a presentation? How would the presentation differ for each?**

* Some of the different types of audiences that one might have to present to would be:

a. Senior Managers – The presentation would focus more on the big picture and how the project or system would fit in with long term strategic-goals for the company.

b.Middle Managers and Supervisors – The presentation would be more detailed. The information would cover information that would help these individuals manage their people and processes as well as giving them the tools to communicate effectively with senior management regarding the project or system.

c.Operational Employees – This presentation would be designed to give these users the information on how the new system/process works and the training required to become proficient at them. It would focus more on the need for the new system/project and how it would benefit these users in the long run.

**Chapter 4b - Personal Trainer, INC**

1. **If Susan wants to conduct a survey of current or prospective members to obtain their input, what type of sampling should she use? Why?**

* If Susan wanted to conduct a survey of current or prospective members, I would recommend she use a Stratified Sampling. The reason that I would recommend she use this type of sampling is so that she would get a representation of the overall population of potential members and more accurate results. Due to the fact that the company has multiple locations throughout the country and will be opening a location in Toronto, she will want to get feedback from all of the different locations. A random Sampling couldn’t guarantee this because it is random and a Systematic Sampling can’t guarantee that you would get a true representation of all areas. The best method in this case would be Stratified Sampling, although you could probably incorporate all three in some way to get a good cross-section as well.

1. **Draw an FDD that shows the main operations described in the fact statement.**

* The FDD showing the main operations described would look like:

Payments received and applied to member accounts

Exception Report for inactive members and late payers

Manager produces Accounts Receivable Summary to HQ with Bumblebee

Deposits Credited to corporate account

**Corporate Headquarters**

**Finance**

**Reporting**

Member Statements prepared and mailed

**Fitness Center**

**Reporting**

**Finance**

**Personal Trainer Inc.**

Quarterly P&L Report with revenue and costs for each activity

Monthly Member Sales Report

Daily Activity Report in Bumblebee

Charges and Cash Sales deposited in local bank

**Chapter 4b - Case in Point 4.2: DEEP RIVER COLLEGE**

The topics Eddie needs to cover during his interview with Alexandra Ali for the proposed Information System in Deep River College would be:

1. The current system – What does it currently do? Who maintains the system? Where is the information of the Alumni stored? When are the personalized letters sent out? How do you currently gather this information? Why has it been done this way? The system currently has no automated way to access past donations and other alumni info, correct?
2. The proposed system – What should it do? Who should maintain the system? Where should the data be stored? When should the letters be sent out to the Alumni? How should the new system maintain the information? Why should the new system work this way? What additional information would you like to see kept in the system? How soon does the system need to be in place? On a scale from 1 to 10 with 1 being the lowest and 10 being the highest, how important is it for the system to track past donations?
3. The proposed costs – What type of costs are associated with the current system? Who is responsible for those costs and maintaining the system?
4. System Scalability – On a percentage scale from 1 to 100 with 1 being not ever needed and 100 being absolutely needed, what do you feel the possibility of the system being required to have alumni interaction through the internet is?