**The Martial Arts Academy (MAA) – School Management System**

**Project Part1: Question: p. 81 – Q4 (MOV), Q5 (TCO, TBO), Q6 (Recommendation)**

**Project Description(MAA Background - p. 16)**

* Grandmaster Taylor taught martial arts for 30 years and retired.
* New owners: Geoff and Julie (Black-belt instructors)
* 35 students (white-belt to Black-belt), pre-paying to take a specific number of classes per week
* A class: 60 minutes long
* Students schedule a day to test; fill out a form; pay a test fee; get permission from instructors to test for their next higher rank
* Kids (6-12) and Adults (over 12); 30% females
* Students signing a contract (with personal information and liability waiver) and keep in a file folder in a cabinet for record
* Discount for signing a week and months
* Instructor puts a clip for each class student card to gauge the student’s progress – Instructors checks cards if any student have gained the stripe for completing 8 hours of class instruction, congratulate if any – Issues : Instructor may not circle/ forgets to put a paper clip/ paper clip falls off
* 36 class hours(4 stripes) students required to have to test for their next rank – if ready, student fills out testing form + 20$ testing fee – black-belt instructor approval
* White, orange, yellow, green, blue, purple, brown, black
* Geoff and Julie – want to retain current students and attract new students
* Competitors – two martial art schools, one martial arts club at university and other sports
* MAA runs a small shop for school supplies, martial arts weapons for better pricing

**Need for a School Management System:**

* Need to hire to build a customer application system for managing day-to-day operation
* Can purchase the SMS or Subscription based and hosted by a third party

**Q4 (MOV)**

**Identify the desired area of impact**

1. **Customer**-

* This is a critical part of our client as the former owner Taylor retired and new owners Geoff and Julie took over MAA. So, the important part is maintaining the old students and attracting the new students.
* Increased customer experience, satisfaction and market performance due to exchange of words between customers
* This attracts customers

1. **Strategic**:

* Consultants would have to team up with Geoff and Julie to work on organization vision, business model and action plan for the better management of the student records.
* Use of better and accessible technology

1. **Operational**:

* Once we have developed a strategy, we will then continue to produce operational strategies.
* Ease-of-maintenance and ease-of-access of the student attendance, belt progress, billing etc.,
* More quickly document a student’s progress and records

1. **Financial**:

* As MAA is implementing an official information management system, the new owners are willing to spend the time, money, and resources for this project.
* Lower costs for lessening the storage due to being small business and also the people hired to manage accessing the records

1. **Social:**

* As referenced above, MAA as of now has an ongoing base of students and needs to keep up with them while attracting new ones. It should increase awareness in their locality.
* Advertising in social media with the presence of better customer services increases the customers which in turn results for the expansion of business

**Identify the desired value:**

1. **Better**:

* The new recommendations will improve day-to-day activities at MAA. It will permit the owners to monitor all student records at the school. It will be efficient as data stored in database without loss of data. The software will be user-friendly, which will make it easy for owners and students to use without ambiguity. The SMS process will provide a way to communicate with the students regarding the latest news in MAA.

1. **Faster**:

* The new software application will be efficient for the owners to track the student activities without loss of data. This will allow instructors to check the complete information of the students at one place

**Develop an appropriate metric:**

* The application must be developed within one month so that the students will start using the application to schedule the day to test, fill out a form, pay test fee, and get permission from the instructors.

**Set** **a time frame for achieving the MOV**

* Within 10-15 days (about 2 weeks) all the previous problems should be resolved, and the application must be developed in 1 month and all the new implementations should be used by the existing students in the next month.
* The work will be faster and will increase the new customers by 10%-15% within 3 months.

**Summarize the MOV**

* Geoff and Julie's main need has been to remain in business by holding their ongoing base of current students and to attract new students.
* As there is a competition between two martial arts schools and other sports, students find it difficult to select the which is better for them. So, the Project team suggested MAA complete the MOV to decrease and maintain the success rate.
* The project will be successful if MAA reduces the day-to-day errors. MAA must reduce errors everyday month to get a new success ratio which can be improved from 15% to 30%.

**A comparison of alternatives**

* **Manual Process:** There is no need for computers and internet access. Instructors and students are already using it. It is easy to understand. This process may take longer than expected. There is a high chance of making mistakes.
* **Customer (Software) Application:** It is easy to understand if something goes wrong. There is no need to worry if the system does not work as we can access the data using the internet from any other system. It will be costly in the future as they must maintain hardware and software.

**Q5(TCO (Total Cost of Ownership))**

**Alternatives:**

**Software Application:** Develop, Test and Maintain an application software

* Direct and Ongoing Costs :
  + Desktop – 700$
  + Printer – 150$
  + Database – 50$ per month
  + Wi-Fi – 150$
* Indirect Costs : (depends)
  + Quality Assurance
  + Time constraint

**Manual Process:**

* Direct and Ongoing Costs :
  + Pen and Paper
* Indirect Costs : (depends)
  + Productivity loss
  + Time constraint

**Q5(TBO (Total Benefits of Ownership))**

Managing the daily work will be easy and errors will be less when using an application. The owners can maintain longtime relation with the customers. When customers are happy with application, and they can recommend it to others which will increase the number of customers. By using social media, the MAA can increase their business.

**Q6(Recommendation)**

We can recommend an application to MAA to look into daily business activities and understand the current issues in their business. So, the new will application will be able to increase the number of customers, reduce the errors.

**Project Part2: Question: p. 113 – Q4, Q5, Q6**

**Q4(A list of resources needed to complete the project)**

* **People (and their roles):**

The people required to complete and execute this application are the Project Manager, Computer Technician, Network Administrator and Business Analyst.

* **Technology:**

It requires hardware, software, and network components. This includes computers, routers, database(cloud), Printers.

* **Facilities:**

Computers must be set up properly. The Network Administrator will set up Wi-Fi all over the MAA.

* Other:

**Q5(An estimate for the cost of each resource)**

* Desktop: 700$
* Printer: 150$
* Database: 50$ per month (600$ per year)
* Wi-Fi: 140$
* Project Manager: 90000$
* Computer Technician: 60000$
* Network Administrator: 75000$
* Business Analyst: 85000$

**Q6(Recommendation)**

* **Fixed price or Lump Sum**

We will take a fixed amount from the MAA as we are just advising what they can do.

* **Cost-reimbursable**
  + Cost-plus-fee or cost-plus-percentage-of-cost
  + Cost-plus-fixed-fee
  + Cost-plus-incentive-fee
* **Time and materials**

**Project Part3: Question: p. 141 – Q4, Q5, Q6, p. 167 – Q4, Q5**

**Q4(Deliverable Structure Chart)**

**Martial Arts Academy**

**Initialize & Conceptualize Project Charter and Plan Execute and Control Close Project Evaluate Project**

**Analysis Design Construction Testing Implementation**

**Information design application install systems and network, create db test systems,db and network application should work**

**gathering**

**Q5(Use Case Diagram)**

**IT (Information Technology) team:**

Set up the computers

Set up the Database

Set up Internet connection

**Project Team**

Save Customer Information

Generate Reports

Post on social media

Working hours

Schedule classes

Check Payments

**Customer**

Create new user

Personal Information

Register for classes

Daily Activities

Online store

Pay fees

Payment History

**Q6(Work Breakdown Structure)**

-0.0 Martial Arts Academy

-1.0 Initialize & Conceptualize

-1.1 Business Case

-1.1.1 Client Meeting

-1.1.2 Gather Information

-1.1.3 Create MOV

-1.1.4 Check Alternatives

-1.1.5 Costs

-1.2 Present Business Case to client

-1.3 Milestone: Business Completed

-2.0 Project Charter and Plan

-2.1 Identify the requirements

-2.1.1 Finalize the resources

-2.1.2 Finalize the costs

-2.2 Milestone: Project charter and plan completed

-3.0 Execute and Control

-3.1 Buy Hardware, Software and Network Components.

-3.2 Setup equipment and Install Software

-3.2 Train the employees

-3.3 Milestone: Implementation Completed

-4.0 Close Project

-4.1 Project Documentation

-4.2 Payment Invoice

-5.0 Evaluate Project

-6.0 Milestone: Project Completed

**Q4(A detailed Project Plan)**

1. From WBS,
2. Link the Tasks

**Q5(Question-Answers)**

1. Project Schedule –
2. Critical Paths –
3. Resources -