

# The Martial Arts Academy: School Management System

Group 1:

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# Overview

- Martial Arts Academy (MAA) is owned by Julie and Geoff, they provide martial art training to students.
- Their Business Operation is Paper based which is used for maintaining student's data, marking their attendance, track their progress and for payment.
- This paper-based technique is error-prone, less effective and inefficient.
- Julie and Geoff have requested a change to a computer-based system that overcomes all these disadvantages and improves their business operation.

# MOV

Potential Area Of Impacts	Desired Impact
Customer	Improved Quality Of Service
	Customer Privacy
Operational	Improved Operational Efficiency
	Enhanced Quality Of Service
Strategic	Improved client experience through Computer based Technology
	Retain old customers and attracts new customer
Financial	Maximum returns in minimum Investment

# Total Cost Of Ownership (TCO)

	Explanation	Alternative A - Maintaining the status quo [Paper Based System]	Alternative B - Purchasing a software package [Zoho CRM]	Alternative C - Building a new product or system [MAA System]
Project Role	B - Project Manager, Developer, Tester, Business Analyst - 20 weeks (800 hours) C - Project Manager, Developer, Tester, Business Analyst, Database Administrator (DBA), Hardware Technician - 20 weeks (800 hours)	\$ 0.00	\$ 94400.00	\$ 140000.00
Hardware	B - Workstations C - Workstations, Server, Network, Router, Firewall, Switch, Ethernet, Cables, UPS	\$ 0.00	\$ 1500.00	\$ 3000.00
Software	B - Cloud application license (Zoho CRM) user/year C - MySQL server license, Oracle License, Development tools support per year	\$ 0.00	\$ 168.00	\$ 800.00
Training	3 Day Training (\$500 per day)	\$ 0.00	\$ 1500.00	\$ 1500.00
Maintenance and Support	B - Its manageable by third party system C - Need Hardware and Software Maintenance / Support (\$1000 per year)	\$ 0.00	\$ 50.00	\$ 1000.00
Facilities	Office Space, Communications and Other Utilities	\$ 0.00	\$ 8000.00	\$ 15000.00
Total Cost		\$ 0.00	\$ 105618.00	\$ 161300.00

# Total Benefits Of Ownership (TBO)

Benefits	Alternative A - Maintaining the status quo [Paper Based System]	Alternative B - Purchasing a software package [Zoho CRM]	Alternative C - Building a new product or system [MAA System]
Quality of Work	2	5	5
Improving Accuracy and Efficiency	2	5	4
Improving Customer Service	1	5	4
Increased number of new customer and Retain Old customers	2	4	4
Minimum Investment	3	5	3
Improving Customer Privacy	1	5	4
Improved Operational Efficiency	2	5	5
Total benefits	13	34	29

# Recommendation

- Currently MAA is working on Paper based system which is vulnerable to Human error which makes it inefficient.
- Given the requirement by the stakeholders, Alternative B (Purchasing a software package) is more suitable option for MAA.
- MAA can purchase a custom subscription-based package (Zoho CRM).
- Use of digital access cards for students and instructors.
- With Subscription-based package , MAA will not need to worry about system/database support and maintenance, it is handled by enterprise.
- Subscription-based package will also aid the organization in dealing with their problems of operational inefficiency and accuracy in dealing with attendance, payment, and tracking student progress as well as scheduling automatically.

# List Of Resources

Resources	Details
People	Project Stakeholders
	Project Manager
	Business Analyst
	Software Developer
	Software Tester
Technology	Hardware
	Software
Facilities	Office Space
	Communications
	Other Utilities
Other	Training
	Maintenance and Support

# Estimated Project Cost

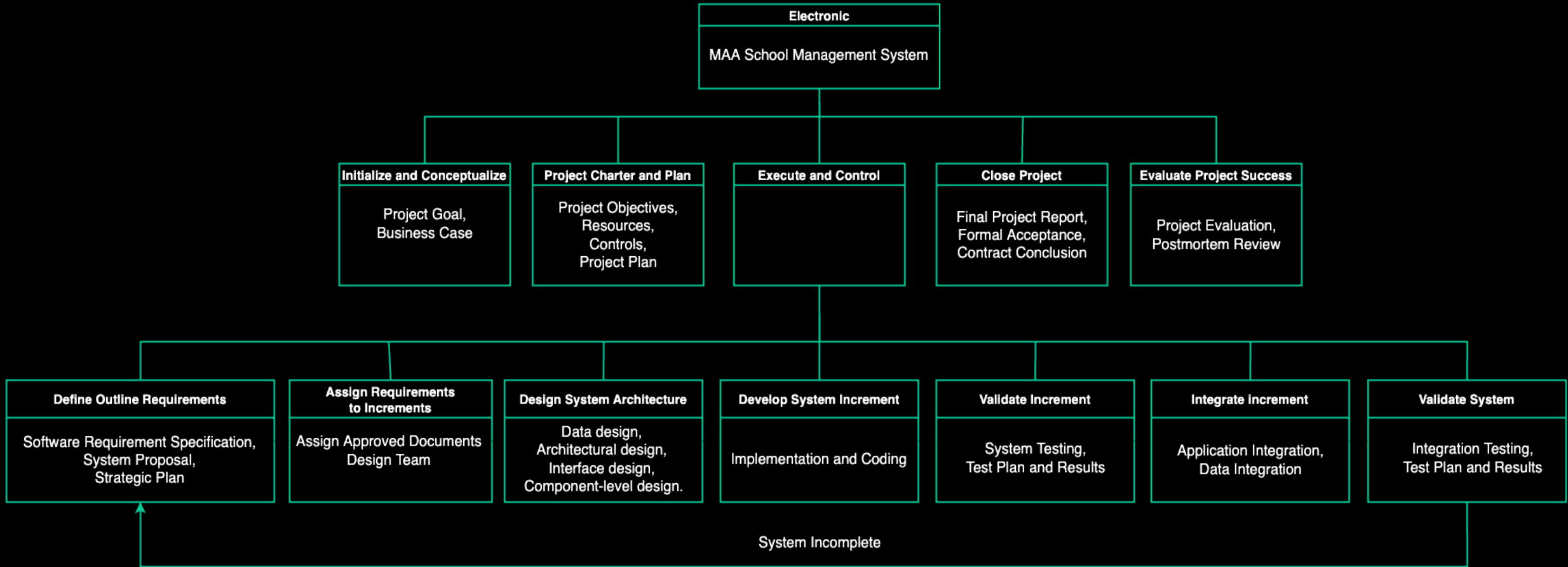
	Explanation	Subscription based software package [Zoho CRM]
People	Project Manager (Salary for 800 hours)	\$ 30400.00
	Business Analyst	\$ 27200.00
	Software Developer	\$ 18400.00
	Software Tester	\$ 18400.00
Technology	Hardware - Workstations	\$ 1500.00
	Software - Cloud application license (Zoho CRM) user/year	\$ 168.00
Facilities	Office Space	\$ 8000.00
	Communications	
	Other Utilities	
Other	Training - 3 Day Training for their employee on software	\$ 1500.00
	Maintenance and Support	\$ 50.00
Total Cost		\$ 105,618.00



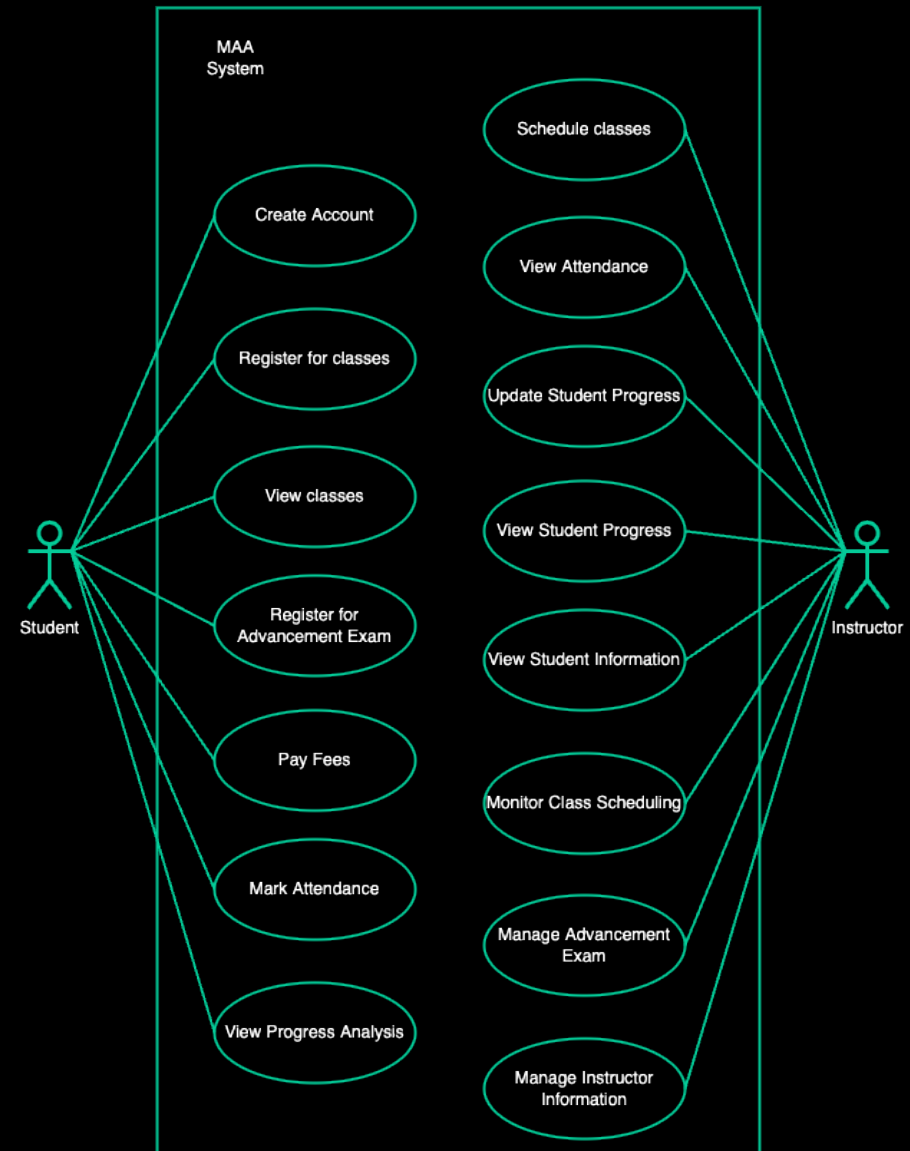
# MAA Contract

- Given that we have been able to determine the unit rates for the resources and the unit rate for subscription to Zoho CRM
- Based on time as well and the fact that we do not yet know for certain the full cost of the project
- we recommend that a Time and materials contract be used.

# Deliverable Structure Chart (DSC)



# Use Case Diagram



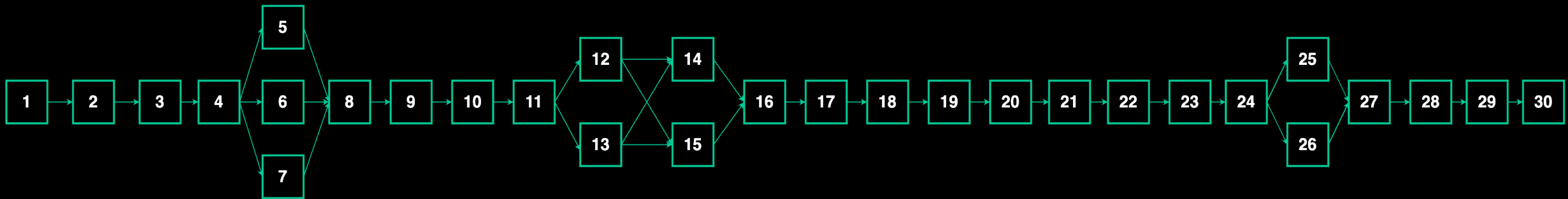
# Work Breakdown Structure (WBS)

1. Initialize and Conceptualize Project (14 Days)
2. Project Charter and Plan (13 Days)
3. Execute and Control - Define Outline Requirements (8 Days)
4. Assign Requirements to Increments (3 Days)
5. Design System Architecture (13 Days)
6. Develop System Increment (40 Days)
7. Validate Increment (17 Days)
8. Integrate increment (16 Days)
9. Validate System (4 Days)
10. Close Project (7 Days)
11. Evaluate Project Success (5 Days)

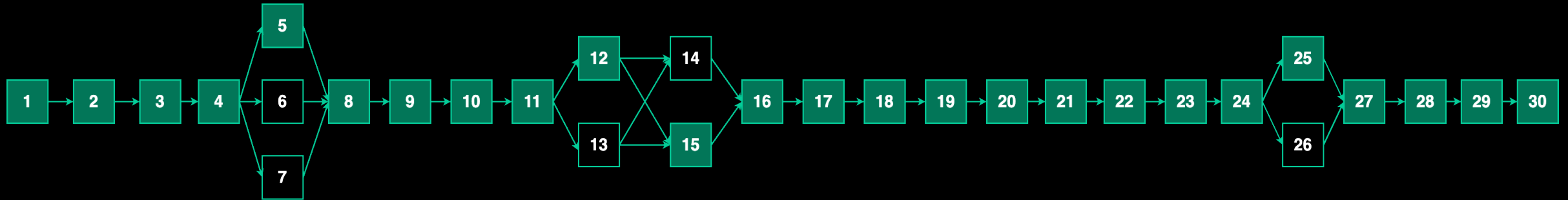
Start Date of the Project	01/08/2022
End Date of the Project	19/12/2022
Total Days to complete the project	140 Days

# Activity on the Node (AON) Network

- AON represents Tasks and Logical Sequence of tasks which consider estimated time of tasks, predecessor, successor and some parallel tasks.
- Total 30 Activities - 9 parallel activities and rest are sequential activities.



# Critical Paths in AON



- Critical path takes longest path in the project network and the shortest time in which the project can be completed.
- Path 7 and Path 18 are the Critical path of our project which will take minimum 127 days for completion of the project.

# Risk Identification and Analysis

Project Phase	Conceptualize and Initialize	Design Project Charter and Plan	Execute and Control	Close Project	Evaluate Project
Reason	Legal Action	Insufficient Funding	Drastic Technology Change	Client rejected Project Deliverables	Project Metric is not met
Type Of Risk	Unknown-Unknown Risk	Unknown-Unknown Risk	Known-Unknown Risk	Known-Unknown Risk	Known-Unknown Risk
Type of Source for the Project Risk	External	External Risk	Internal	Internal	External
Sources of the Risk	People, Legal, Product, Organization	People, Environment, Organization	Technology, People, Product	People, Organization, Process	Product, People
Project Objectives	Scope, Schedule and Budget	Scope, Schedule, Quality and Budget	Quality, Schedule, Budget	Scope, Budget, Schedule	Scope, Schedule, Quality, Budget
MOV ( Need to revise )	Scope needs to be modified	Need to rework on finance module	N/A	Need to work on operational, customer module	Need to upgrade on operational, customer module

# Strategy for managing particular risk

Project Phase	Conceptualize and Initialize	Design Project Charter and Plan	Execute and Control	Close Project	Evaluate Project
Reason	Legal Action	Insufficient Funding	Drastic Technology Change	Client rejected Project Deliverables	Project Metric is not met
Ownership of the Risk	Business Analyst	Stakeholder	Project Manager	Project Manager	Business analyst, Project Manager
Suggested Strategy	Management reserves, Mitigate	Contingency reserves	Contingency Plans	Mitigate	Accept or Ignore



Thank You