Methodology and Techniques

Dynamic System Development Model Atern (DSDM Atern), which is an agile development framework, will be used to produce the desired product of this project. DSDM Atern is one of the agile frameworks that companies use due to its features of fixed time and cost. Scope will be the only factor that will change mostly in this project. The Project in a Box has DSDM Atern templates. These will greatly help us in delivering documents and keep us on the right track throughout the project.

This project will use the seven phases of DSDM Atern which are as follows:

1. Pre-project

2. Feasibility

3. Foundation

4. Exploration

5. Engineering

6. Deployment

7. Post-project

The phases of the DSDM Atern will be used as the guide in setting the dates, and distributing and prioritizing tasks. DSDM follows a reverse triangle planning. The project requirements must be extensively and carefully planned at the start before proceeding to the next phases. Delivering the deliverables on time without sacrificing the quality is what makes DSDM hard to use but worth it at the end. Project management techniques will be used to deliver the solution on time. These techniques will act as the blueprint of the project and will be strictly followed by every member in the project.

Core techniques in DSDM Atern are as follows:

1. Time Boxing

2. MoSCoW Prioritisation

3. Facilitation Workshop

The MoSCoW term above stands for the following:

M – Must Have

S – Should Have

C – Could Have

W– Won’t Have this time

“Must Have” are the core tasks and are prioritized for the project. Not all tasks should be assigned under “Must Have” especially if it is not important or if it will not affect the project. Most of the remaining items can be moved to “Should Have” or “Could Have”. “Won’t have this time” will be the tasks that could done once the other important tasks are delivered.

Time Boxing or Project timeline were used for the Time box approach of the Atern, a timeline for the whole project were planned out and tasks were distributed to the member of the team by the end of the day or week the member needs to talk to the project manager to report for the progress of the task or a progress report. A set date for each task were align to each member and needs to follow to reach the deadline of the project without sacrificing the quality.

Facilitation Workshops or Team meeting will also be used. It is composed of meetings where progress is checked and tasks are distributed. This will be the time to talk about any suggestions about the project, risks that may arise, and confusions about each task. The meeting was set during Monday, Tuesday, Wednesday and Sunday was every member of the team is available to meet. The project advisor will be included in a weekly advisor meeting wherein the team will show the progress of the project and will ask for advice if the project is going on the right track.

To follow the DSDM Atern methodology framework, software named **Project In A Box** were used as a guide to create the required documents.

The Pre-project, Feasibility and Foundation were merged since all the documents for each phase are similar and only differs when the requirement were finalize before proceeding to the next phase.

**Pre-project Phase**, describe the project problem and make a short documentation of the strategy to write a plan and scope for the project.

Delivery Approach Definition

Purpose of this document

* To define standards and styles to be applied during development of the solution
* To describe practices to be adopted by the Solution Development Teams in the development of those technical products
* To define the Configuration Management process for the technical deliverables of the solution
* To describe how, and against what criteria, the outputs of the project will be reviewed and tested.
* To describe testing and/or review techniques that will be applied in the development phases of the project.

Project Roles Summary - will be the document to tell what the assign works are for each member of the team and what to expect to them in the whole project.

Terms of Reference:

Purpose of this document

|  |  |  |
| --- | --- | --- |
|  | To state the business drivers for and objectives of the projectTo describe in outline the scope of the projectTo state any dependencies and constraints already knownTo identify resources required for the next phaseTo justify and secure funding for a feasibility investigation |  |

**Feasibility Phase,** will be the phase to study the Pre-project phase to make sure that the project will be viable.

Feasibility Assessment:

Purpose of this document

|  |  |  |
| --- | --- | --- |
|  | * To describe the business vision for the successful outcome of the project * To outline quantified benefits to be delivered along with a justifiable budget for the project. * To outline the critical success factors for the project in terms of: - Timescale, Cost and Scope of deliverables * To give a preliminary indication of any areas within the scope which may be desirable but not essential * To state any known assumptions and constraints associated with the project * Where appropriate, to describe the strategic fit of the recommended solution with applicable corporate/business strategies and standards, stating any concessions/assumptions made. * To identify which business processes and/or systems (whether automated or not) might be impacted by the new solution and which might need to change in order to accommodate it. * To identify any interfaces to associated business process or information systems. * To formally assess the risk related to the project and realization of benefits. * To describe in outline one or more solutions most likely to meet the business drivers and project objectives * To indicate what other apparently less promising options have been, or could be considered * To define the major products to be delivered by the project * To indicate whether the solution will be subject to regulatory and/or legal compliance * To define the expected life of the solution and hence the requirements for maintainability * To identify any technical standards and constraints that are likely to impact on the project |  |

Outline Plan:

Purpose of this document

|  |  |  |
| --- | --- | --- |
|  | * To outline the proposed project management approach for the whole project. * To provide management with preliminary estimates of the financial and resource implications of the proposed project as a whole. * To provide a basis for agreement of timescales for the project. * To define the high-level acceptance criteria for the proposed deliverables * To identify any particular facilities which the Solution Development Team(s) will require (e.g. clean rooms, collocation, video-conference facilities). * To outline the approaches to configuration management, change control, reviews and risk management. * For the Foundations phase, to define in detail:   + The objectives for the phase   + The project organization, roles and responsibilities   + The approach to delivering the Foundations products   + Key activities to be carried out   + The likely timescale for the phase   + Any constraints assumptions and risks that may impact the scope, timeliness or quality of the Foundations work |  |

**Foundation**, is the combination of the Pre-project and Feasibility to ensure that the project will be firm and strong throughout the process and business solution needs to be created to support the development of the project and how to meet its requirements.

Business Foundation

Purpose of this document

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| --- | --- | --- |
|  | * To provide a clear statement of the Business Vision for the project * To construct a few paragraphs describing the ‘big picture’ of the business, as it will be after the project has completed. * To describe how that picture differs from the current reality * To describe how this project will contribute to the required change * To name any other projects, either planned or in progress, that form part of the vision or may have an impact on vision * Specifically NOT to state requirements for the proposed solution * To present a Business Case for the project * To quantify the benefits to be delivered * To summarize the cost of the project and set the project budget * To perform a cost/benefit analysis to an appropriate level to justify the project * To define the critical success factors for the project in terms of: - * Timescale for delivery * Cost of delivery * Scope of deliverables * By reference to the Prioritised Requirements List, to define areas within the scope which may be desirable but not essential * To describe the strategic fit of the recommended solution with any applicable corporate/business strategies and standards, stating any concessions or assumptions made. |  |

Management Foundation

Purpose of this document

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|  | * To describe the overall approach for managing delivery of the project products. * To identify where, amongst the three key constraints, (scope, time and resources/cost) contingency is most likely to be placed. * To describe how the DSDM Atern approach needs to be tailored for use on this project, considering the DSDM Atern principles and the placement of contingency. * To identify individuals playing key roles on the project and defining their responsibilities (including any external resources interfacing directly with the internal members of the project team). * To describe how essential project management practices will be applied. (e.g. Risk Management, Configuration Management, Change Control, Communication, Monitoring and Control) |  |

Prioritised Requirement

Purpose of this document

* To provide a list of requirements to be addressed by Exploration and Engineering activities. The requirements will have been prioritised using the MoSCoW prioritisation process
* To define the overall scope of the project
* To identify the Minimum Usable Subset for one or more increments of development

System Architecture

Purpose of this document

* To provide a common understanding of the technical architectures to be used during development and deployment of the solution including:
  + Hardware/Infrastructure
  + Software Architecture
* To describe the target environment for the solution and (if different) the development environment.
* To provide an outline description of anticipated developments in areas such as:
  + Hardware (i.e. the infrastructure, processing, storage, networking etc.) for both development and deployment
  + Software (i.e. the major software objects or components - both process and data - and their interactions)
  + Information Security (e.g. access policy, access control etc.)

The **Exploration Phase** or Development Phase 1

This phase is the Version Prototype of the project, the website and .exe application were being develop in this phase by the end of the phase a version prototype will be created. To document the progress of the software testing, issue and register log were created to monitor the status of the project software any problem arise during the exploration phase will be report to the team to think of solution during meeting.

Software to be develop:

* Client Application – the software for the user which can be downloaded from the Database Evaluator website.
* Database Evaluator Website (Wordpress)

Document File to be created:

* Issue log
* Risk log

The **Engineering Phase** or Development Phase 2

This phase is the continuation of the Exploration to finish the development of the software which is the Database Evaluator and to finish the website as well same as the Exploration Phase. Issue log and Risk log will be created to monitor any task that is being left behind. A meeting will be held to discuss the issue and risk log of the engineering phase.

Software to be created:

* Database Evaluator – software that will be used by the Database Team.
* Database Evaluator Website (Wordpress)

Document File to be created:

* Issue log
* Risk log

**Deployment**