Project Proposal

**Client:**  The Department of Elections of Sri Lanka

**Project:** Election Results Management System (ERMS)

**Software Development team**

***Name Index number***

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**Main outcomes and breif description on USE CASES of the project.**

The main objective of proposed EMRS is to deliver accurate election results counted at the polling centers to the Election secretariat and publishing those results after confirmed by authorized officer.

According to the problem definition we identified 4 functional requirements and also there must be some nonfunctional requirements such as security and durability.

When considering the functionality of the proposed system it should receive election results from polling centers and send those election results by internet and by a set of sms. For this functional requirement we found two use cases first one is add new election result with data by internet. Actor for this use case is officer in charge at polling centers. According to this use case after officer entering results, those results should be recorded in central server. After sending results by internet officer have to send set of sms to confirm results so another use case is record election results received via sms. Actor for this use case is also officer in charge at polling centers. The government has pledged to provide at least one communication way to every polling center. When it is difficult to provide a computer with internet connection officer in charge in polling center have to send results as set of sms and to confirm he has to send a signed result sheet to election secretariat. After receiving result sheet staff member in secretariat has to insert results via a different interface. So another use case is record results received by result sheets. Actor for this use case is staff member in election secretariat.

Second functional requirement is to confirm results before accumulating. In this case officer in secretariat have to confirm results before accumulating. So the use case related to this requirement is ‘confirm results’ and actor is officer in election secretariat.

Next functional requirement is view accumulated data. After results are confirmed selected group of officers in secretariat is allowed to view the results. So the actor for ’look up election results ’ is set of officers in secretariat.

Final functional requirement is publishing results in official web site after completing counting in a particular election district and notifying selected set of media organizations. Use cases related to this requirement is publishing election results and notification of media organizations by email actor for this use case is not mentioned in problem definition but it should be an officer in charge who responsible for publishing election results.

**Sources of information related to the project, including the concerned stakeholders and the material to be consulted.**

The main purpose of the project is automating election results transfer as “Election Results Management System (ERMS)” .The project is mainly based on the web based application. The in charge of the polling centre and the sectarians of Election commission can access the web.

Here the main stake holder of this project is sectarian of election commission as well as the team responsible to the project. To gather the source of information that is related to the project we are going to organize some procedures that are stated below:

1. Review the existing reports, forms and procedure descriptions.

* Here we analyzed the existing project reports, forms, documents,laws,security and procedure description related to election commission.

2. Discussions with stake holders.

* Interviewing stakeholders is by far the most effective way to understand business functions and business rules. Here system analysts meet with individuals or group of users.
* A list of detailed questions is prepared, and discussion continues until all the processing requirements are understood and documented by the project team.

3. Build the prototypes-presenting updates via prototypes are very effective to explain/understand from the stakeholders.

4. Conduct joint application design sessions.

* It expedites the investigation of system requirements, and the objective of JAD is to compress all of the activities into a shorter series of JAD sessions with users and project members.

**In different activities within the life-cycle of the project we have to use various tools.**

* **We have to use an image editor tool for Requirement gathering and analysing.**

In drawing Work Flow Diagrams, Domain Modelling, Modeling of Behavioural Requirements and Information Flow within the System, Logical Architecture Modelling of the System & Modelling of Inter-object Communications in a System we are planning to use the online tool called draw.io

Pattern-based Software Designs, Software Architectures, Requirements and Design, Software Architectures for Macro-level Designs and Software Architectures for Application and System Level Designs can also be done by this tool.

Tool: Draw.IO



Draw.io is a fully functional online image editor that provides its user easy, fast, and free way to create simple diagrams without the need to install anything on their computer. Everything that Draw.io offers can be quickly accessed via your web browser. Draw.io is based on **mxGraph** JavaScript Library which is widely used by top companies around the globe.

Editor that welcomes you as soon as you enter Diagramly’s website will enable you to immediately start drawing your diagrams, no matter if you are novice of professional. Every object that can be found in the sidebar of Draw.io can be dragged and dropped to the work surface, and then modified to better suit your purposes. Everything that you will need to create diagram is present here – from simple drawing tools, advanced shapes, vector graphic icons, to the professional looking clip art images from various fields of design (computers, people, finance, etc.).

Features:

* Native HTML 5 client with full IE 6-8 support
* Large stencil library built-in
* Intuitive drag and drop interface
* Image search and add functionality
* Export to PNG/JPG/XML/SVG
* Touch device support
* Full source code at github, Embed diagrams in blogs or wikis
* Real-time collaboration

Functionalities:

* Can create UML Diagrams, Entity Relation Diagrams, Lean Mapping based diagrams etc. using this online diagram drawing tool.
* Three categories dedicated to BPMN (Business Process Model and Notation) so you can model your business process too using this Online Drawing Tool.
* Categories like Mockup Buttons, Mockup Forms, and Mockup Navigation available which can be used to create Mockup screens or UI for the applications/software that you develop.
* Six cool Clipart categories which can used for lot of different purposes, you can also find an image from Google and use it in your diagram (check image rights before you them).
* Can just export your diagram and save it in PNG, GIF, JPG, PDF, SVG or XML format.
* **In managing this project we have to use Project management softwear.**

Tool: Microsoft project

 Microsoft Project is a [project management software](http://en.wikipedia.org/wiki/Project_management_software) program, developed and sold by [Microsoft](http://en.wikipedia.org/wiki/Microsoft), which is designed to assist a[project manager](http://en.wikipedia.org/wiki/Project_manager) in developing a [plan](http://en.wikipedia.org/wiki/Plan), assigning [resources](http://en.wikipedia.org/wiki/Resource_(project_management)) to tasks, tracking progress, managing the [budget](http://en.wikipedia.org/wiki/Budget), and analyzing workloads.

Microsoft Project was the company's third Microsoft Windows-based application, and within a couple of years of its introduction it became the dominant PC-based project management software.

While part of the [Microsoft Office](http://en.wikipedia.org/wiki/Microsoft_Office) family, it has never been included in any of the Office suites. It is available currently in two editions, Standard and Professional. Microsoft Project's [proprietary file format](http://en.wikipedia.org/wiki/Proprietary_format) is *.mpp*

* **As this project is a group project using Version control tool would make this task a lot easier.**

Tool: GitHub

GitHub is a web-based [Git](http://en.wikipedia.org/wiki/Git_(software)) repository hosting service, which offers all of the [distributed revision control](http://en.wikipedia.org/wiki/Distributed_revision_control) and [source code management](http://en.wikipedia.org/wiki/Source_code_management)(SCM) functionality of Git as well as adding its own features. Unlike Git, which is strictly a [command-line](http://en.wikipedia.org/wiki/Command-line) tool, GitHub provides a [web-based graphical interface](http://en.wikipedia.org/wiki/Web_application) and desktop as well as mobile integration. It also provides [access control](http://en.wikipedia.org/wiki/Access_control) and several collaboration features such as [wikis](http://en.wikipedia.org/wiki/Wiki), [task management](http://en.wikipedia.org/wiki/Task_management), and [bug tracking](http://en.wikipedia.org/wiki/Bug_tracking_system) and [feature requests](http://en.wikipedia.org/wiki/Software_feature) for every project.

* **Also we have to use an integrated development environment(s) in coding the project**.

Tool: netbeans



NetBeans is an [integrated development environment](http://en.wikipedia.org/wiki/Integrated_development_environment) (IDE) for developing primarily with [Java](http://en.wikipedia.org/wiki/Java_(programming_language)), but also with other languages, in particular [PHP](http://en.wikipedia.org/wiki/PHP), [C](http://en.wikipedia.org/wiki/C_(programming_language))/[C++](http://en.wikipedia.org/wiki/C%2B%2B), and [HTML5](http://en.wikipedia.org/wiki/HTML5).[[3]](http://en.wikipedia.org/wiki/NetBeans#cite_note-3) It is also an [application platform](http://en.wikipedia.org/wiki/Platform_(computing)) framework for Java desktop applications and others.

The NetBeans IDE is written in Java and can run on Windows, OS X, Linux, Solaris and other platforms supporting a compatible[JVM](http://en.wikipedia.org/wiki/Java_Virtual_Machine).

The NetBeans Platform allows applications to be developed from a set of modular [software components](http://en.wikipedia.org/wiki/Software_component) called *modules*. Applications based on the NetBeans Platform (including the NetBeans IDE itself) can be extended by [third party developers](http://en.wikipedia.org/wiki/Third_party_developer).

**Initial Project Schedule**

1. Inception Phase

Starting date – 26.01.2015

Ending date – 02.02.2015

* 1. A vision document
  2. An initial use case model (10%-20% complete)
  3. An initial project glossary
  4. An initial business case, which includes business context, success criteria and financial forecast
  5. An initial risk assessment
  6. A project plan, showing phases and iterations
  7. A business model
  8. One or several prototypes

1. Elaboration Phase

Starting date – 02.02.2015

Ending date – 20.02.2015

* 1. Use case model (At least 80% complete)
  2. Supplementary requirements capturing the non-functional requirements and any requirements that are not associated with a specific use case
  3. A Software Architecture Description
  4. An executable architectural prototype
  5. A revised risk list and a revised business case
  6. A development plan for the overall project, including the coarse-grained project plan, showing iterations and evaluation criteria for each iteration
  7. An updated development case specifying the process to be used
  8. A preliminary user manual

1. Construction Phase

Starting date – 20.02.2015

Ending date – 20.03.2015

* 1. The software product integrated on the adequate platforms
  2. The user manuals
  3. A description of the current release

1. Transition Phase

Starting date – 20.03.2015

Ending date – 27.03.2015

* 1. “Beta Testing” to validate the new system against user expectations
  2. Parallel operation with a legacy system that it is replacing
  3. Conversion of operational databases
  4. Training of users and maintainers
  5. Roll-out the product to the marketing, distribution, and sales teams