Software Requirements Specification

for

<Project>

Version <X.X>

Prepared by

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Revisions

Version	Primary Author(s)	Description of Version	Date Completed
Draft Type and Number	Full Name	Information about the revision. This table does not nee to be filled in whenever a document is touched, only when the version is being upgraded.	00/00/00

<In this template you will find text bounded by the "<>" symbols. This text appears in italics and is intended to guide you through the template and provide explanations regarding the different sections in this document. There are two types of comments in this document. These comments that are in black are intended specifically for that course. These comments that are in blue are more general and apply to any SRS. Please, make sure to delete all of the comments before submitting the document.

The explanations provided below, do not cover all of the material, but merely, the general nature of the information you would usually find in SRS documents. It is based on the IEEE requirements and was adapted specifically for the needs of Software Engineering 3K04/3M04 courses. Most of the sections in this template are required sections, i.e. you must include them in your version of the document. Failure to do so will result in marks deductions. Optional sections will be explicitly marked as optional.

1. - Introduction

<TO DO: Please provide a brief introduction to your project and a brief overview of what the reader will find in this section.>

1. A propos de ce document (Document purpose)

<Identify the product whose software requirements are specified in this document, including the revision or release number. Describe the scope of the product that is covered by this SRS, particularly if this SRS describes only part of the system or a single subsystem.>

TO DO: Écrivez un ou deux paragraphes décrivant l'objectif de ce document comme expliqué ci-dessus.

1. Portée du produit (Product Scope)

<Provide a short description of the software being specified and its purpose, including relevant benefits, objectives, and goals.>

TO DO: Écrivez un ou deux paragraphes décrivant la portée du produit. Décrivez bien les avantages attendus de l'utilisation de ce produit.

1. Public concerné et vue d'ensemble de ce document (Intended Audience and Document Overview)

<Describe the different types of reader that the document is intended for, such as developers, project managers, marketing staff, users, testers, and documentation writers (In your case it would probably be the "client" and the professor). Describe what the rest of this SRS contains and how it is organized. Suggest a sequence for reading the document, beginning with the overview sections and proceeding through the sections that are most pertinent to each reader type.>

1. Définitions, acronymes et abréviations (Definitions, Acronyms and Abbreviations)

<Define all the terms necessary to properly interpret the SRS, including acronyms and abbreviations. You may wish to build a separate glossary that spans multiple projects or the entire organization, and just include terms specific to a single project in each SRS.>

TO DO: Écrivez une liste des abréviations et des acronymes utilisés dans ce document, par ordre alphabétique.

1. Conventions de rédaction du document (Document Conventions)

<In general this document follows the IEEE formatting requirements. Use Arial font size 11, or 12 throughout the document for text. Use italics for comments. Document text should be single spaced and maintain the 1" margins found in this template. For Section and Subsection titles please follow the template.>

TO DO: Décrivez les standards de notations et/ou les conventions typographiques utilisés dans ce document, comme les polices de caractères. Parfois, il est utile de structurer cette section pour séparer les conventions de format, de noms, etc.

1. Références et remerciements (References and Acknowledgments)

<List any other documents or Web addresses to which this SRS refers. These may include user interface style guides, contracts, standards, system requirements specifications, use case documents, or a vision and scope document. >

TO DO: Utilisez le standard IEEE pour les références dans cette partie.
http://library.queensu.ca/book/export/html/5846

1. - Description globale

(Overall Description)

1. Perspective du produit (Product Perspective)

<Describe the context and origin of the product being specified in this SRS. For example, state whether this product is a follow-on member of a product family, a replacement for certain existing systems, or a new, self-contained product. If the SRS defines a component of a larger system, relate the requirements of the larger system to the functionality of this software and identify interfaces between the two. In this part, make sure to include a simple diagram that shows the major components of the overall system, subsystem interconnections, and external interface. In this section it is crucial that you will be creative and provide as much information as possible.>

TO DO: Fournissez au moins un paragraphe décrivant la perspective du produit. Faites un diagramme pour illustrer comment le produit interagit avec l'environnement et dans quel contexte il va être utilisé.

Le besoin originel de ce produit provient de l'absence de système de gestion des absences automatisé au sein de l'Université de Lorraine. Jusqu'ici, l'appel était fait sur papier par les professeurs, puis une saisie sur Excel était effectuée par la Scolarité. Les élèves ne pouvait alors consulter leurs absences que par le biais de feuilles Excel exportées au format PDF tous les 3 mois. Il s'agit donc pour ce produit de permettre aux étudiants de consulter leurs absences en temps réel

et de les justifier, de permettre aux professeurs de saisir les absences au moment de l'appel et de permettre

Les acteurs "professeur" et "scolarité" seront repris en compte dans ce produit, et les acteurs "étudiants" et "maintenance" seront ajoutés. Le produit utilisera de plus le logiciel ADE déjà en place dans l'infrastructure de l'Université de Lorraine afin d'en récupérer l'emploi du temps et de le modifier.

1. Fonctionnalités du produit (Product Functionality)

<Summarize the major functions the product must perform or must let the user perform. Details will be provided in Section 3, so only a high level summary is needed here. Organize the functions to make them understandable to any reader of the SRS. A picture of the major groups of related requirements and how they relate, such as a top level data flow diagram or object class diagram, will be effective.>

TO DO:
1. Listez les fonctions principales du système
2. (Option) Fournissez un diagramme de flot de données du système pour montrer comment ces données sont liées les unes aux autres

1. Utilisateurs (Users and Characteristics)

<Identify the various users that you anticipate will use this product. Users may be differentiated based on frequency of use, subset of product functions used, technical expertise, security or privilege levels, educational level, or experience.>

TO DO:
1. Décrivez les caractéristiques pertinentes de chaque utilisateur. Certains besoins ne peuvent être liés qu'à certains utilisateurs.
3. Distinguez les utilisateurs les plus importants pour ce produit par rapport à ceux qui sont moins important.

1. Environnement d'exécution (Operating Environment)

<Describe the environment in which the software will operate, including the hardware platform, operating system and versions, and any other software components or applications with which it must peacefully coexist. In this part, make sure to include a simple diagram that shows the major components of the overall system, subsystem interconnections, and external interface.>

TO DO: Décrivez en un paragraphe l'environnement dans lequel ce système doit s'exécuter. Soyez sûr d'inclure les besoins minimum en terme de plateforme pour ce système.

1. Contraintes de conception et d'implémentation (Design and Implementation Constraints)

<Describe any items or issues that will limit the options available to the developers. These might include: hardware limitations (timing requirements, memory requirements); interfaces to other applications; specific technologies, tools, and databases to be used; parallel operations; language requirements; communications protocols; security considerations; design conventions or programming standards (for example, if the customer's organization will be responsible for maintaining the delivered software).>

TO DO: Identifiez au moins 5 contraintes liées à la conception et à l'implantation par rapport aux informations auxquelles vous avez accès.

1. Manuel utilisateur (User Documentation)

<List the user documentation components (such as user manuals, on-line help, and tutorials) that will be delivered along with the software. Identify any known user documentation delivery formats or standards.>

TO DO: Indiquez les manuels utilisateurs qu'il faudra développer pour permettre l'utilisation de votre application. Un paragraphe est suffisant.

1. Hypothèses et dépendances (Assumptions and Dependencies)

<List any assumed factors (as opposed to known facts) that could affect the requirements stated in the SRS. These could include third-party or commercial components that you plan to use, issues around the development or operating environment, or constraints. The project could be affected if these assumptions are incorrect, are not shared, or change. Also identify any dependencies the project has on external factors, such as software components that you intend to reuse from another project.>

TO DO: Fournissez une liste courte des hypothèses qui peuvent de façon significative affecter votre conception.

1. - Besoins spécifiques

(Specific Requirements)

1. Besoins externes (External Interface Requirements)

1. Interfaces utilisateur (User Interfaces)

<Describe the logical characteristics of each interface between the software product and the users. This may include sample screen images, any GUI standards or product family style guides that are to be followed, screen layout constraints, standard buttons and functions (e.g., Cancel) that will appear on every screen, error message display standards, and so on. Define the software components for which a user interface is needed.>

TO DO: Le minimum à faire dans cette section est de décrire les différentes interfaces utilisateurs et les différents écrans qui seront disponibles pour les utilisateurs. Vous pouvez éventuellement en dessiner certaines (http://balsamiq.com/)

1. Interfaces matérielles (Hardware Interfaces)

<Describe the logical and physical characteristics of each interface between the software product and the hardware components of the system. This may include the supported device types, the nature of the data and control interactions between the software and the hardware. You are not required to specify what protocols you will be using to communicate with the hardware, but it will be usually included in this part as well.>

TO DO: Fournissez une petite description des interfaces matérielles. Si vous utilisez des librairies particulières pour communiquer avec votre logiciel, indiquez les ici.

1. Interfaces logicielles (Software Interfaces)

<Describe the connections between this product and other specific software components (name and version), including databases, operating systems (Windows? Linux? Etc…), tools, libraries, and integrated commercial components. Identify the data items or messages coming into the system and going out and describe the purpose of each. Describe the services needed and the nature of communications. Identify data that will be shared across software components. If the data sharing mechanism must be implemented in a specific way (for example, use of a global data area in a multitasking operating system), specify this as an implementation constraint.>

TO DO: Indiquez surtout les interfaces à utiliser avec ADE et le CAS.

1. Interfaces de communication (Communications Interfaces)

<Describe the requirements associated with any communications functions required by this product, including e-mail, web browser, network server communications protocols, electronic forms, and so on. Define any pertinent message formatting. Identify any communication standards that will be used, such as FTP or HTTP. Specify any communication security or encryption issues, data transfer rates, and synchronization mechanisms.>

TO DO: Ne pas donner trop de détails, mais indiquez en 2 paragraphes les principaux standards de communication que vous allez utiliser.

1. Besoins fonctionnels (Functional Requirements)

<Functional requirements capture the intended behavior of the system. This behavior may be expressed as services, tasks or functions the system is required to perform. This section is the direct continuation of section 2.2 where you have specified the general functional requirements. Here, you should list in detail the different product functions with specific explanations regarding every function.>

TO DO: Décomposez les besoins fonctionnels en grandes catégories et créez des sous-sections pour chacune d'elles (user requirements).

1. Besoins comportementaux (Behaviour Requirements)

1. Diagramme de cas d'utilisation (Use Case View)

<A use case defines a goal-oriented set of interactions between external actors and the system under consideration. Since sometimes we will not be able to specify completely the behaviour of the system by just State Diagrams, we use use-cases to complete what we have already started in section 3.3.1.>

TO DO: Faites des diagrammes de cas d'utilisation pour l'ensemble du système et des acteurs. Donnez une description simple de chacun des cas.

1. Détails des cas d'utilisation (Use Case Details)

TO DO: Détaillez chaque cas d'utilisation, en utilisant le support de présentation que vous souhaitez (texte, diagramme de séquence, … (system requirements).

1. - Autres besoins non fonctionnels (Other Non-functional Requirements)

1. Besoins liés aux performances (Performance Requirements)

<If there are performance requirements for the product under various circumstances, state them here and explain their rationale, to help the developers understand the intent and make suitable design choices. Specify the timing relationships for real time systems. Make such requirements as specific as possible. You may need to state performance requirements for individual functional requirements or features.>

TO DO: Essayez d'identifier au moins 5 besoins liés aux performances.

1. Besoins liés à la sécurité (Safety and Security Requirements)

<Specify those requirements that are concerned with possible loss, damage, or harm that could result from the use of the product. Define any safeguards or actions that must be taken, as well as actions that must be prevented. Refer to any external policies or regulations that state safety issues that affect the product's design or use. Define any safety certifications that must be satisfied. Specify any requirements regarding security or privacy issues surrounding use of the product or protection of the data used or created by the product. Define any user identity authentication requirements.>

TO DO: Fournissez au moins 3 besoins de sûreté et faites également une liste des besoins de sécurité principaux.

1. Besoins liés à la qualité du produit (Software Quality Attributes)

<Specify any additional quality characteristics for the product that will be important to either the customers or the developers. Some to consider are: adaptability, availability, correctness, flexibility, interoperability, maintainability, portability, reliability, reusability, robustness, testability, and usability. Write these to be specific, quantitative, and verifiable when possible. At the least, clarify the relative preferences for various attributes, such as ease of use over ease of learning.>

TO DO: Décrivez quelques besoins liés à la qualité du logiciel et spécifiez des moyens de les vérifier de manière quantitative si possible.

1. - Autres besoins

(Other Requirements)

<This section is Optional. Define any other requirements not covered elsewhere in the SRS. This might include database requirements, internationalization requirements, legal requirements, reuse objectives for the project, and so on. Add any new sections that are pertinent to the project.>

TO DO: Ajoutez dans ce paragraphe des besoins non cités par ailleurs, concernant par exemple une base de données, des contraintes légales, etc.

Appendix A

Dictionnaire de données (Data Dictionary)

<Data dictionary is used to track all the different variables, states and functional requirements that you described in your document. Make sure to include the complete list of all constants, state variables (and their possible states), inputs and outputs in a table. In the table, include the description of these items as well as all related operations and requirements.>

TO DO: Donnez une définition des données, de leurs états possibles.

Appendix B

Gestion de projet (Group Log)

<Please include here all the minutes from your group meetings, your group activities, and any other relevant information that will assist the Teaching Assistant to determine the effort put forth to produce this document.>

TO DO: Ajoutez les comptes-rendus des réunions de groupes. Expliquez votre méthode de travail et toute information relative à l'effort fourni pour produire ce document.