

WEB BASED MEETING SCHEDULER SYSTEM

Project Phase 2

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1 Introduction

1.1 Overview

A Vision Document is a software process document that describes the overall 'vision', or plan, for a particular piece of software. The Vision provides a high-level, sometimes contractual, basis for the more detailed technical requirements. It captures the "essence" of the envisaged solution in the form of high-level requirements and design constraints that give the reader an overview of the system to be developed from a behavioral requirements perspective. It defines the stakeholder's view of the product to be developed, specified in terms of the stakeholder's key needs and features. Containing an outline of the envisioned core requirements, it provides the contractual basis for the more detailed technical requirements. It is much shorter and more general than a product requirements document or a marketing requirements document, which outline the specific product plan and marketing plan respectively. It provides input to the project-approval process and is, therefore, closely related to the Business case. It communicates the fundamental "why and what" for the project and is a gauge against which all future decisions should be validated.

1.2 Purpose

The purpose of this document is to analyze, define the features, and defines the high level needs of the web based meeting scheduler. It is focused on the needs, and capabilities of those who use the application (stakeholders and the target users). The details on how the application fulfills the needs of the users are outlined in use-case and supplementary specifications.

1.3 Scope

This Vision Document applies to the WMS, which will be developed by the Call of duty development team. This document has been written to describe what the Web based Meeting Scheduler is and the process to its creation. This application is a solution for scheduling meetings. It will be able to take in user input, such as their preferences for the meeting, and help solve any conflict that might arise. It allows the individuals or the organizations: to easily, efficiently, and precisely schedule meetings in accordance with practical limitations of virtual and real-world meetings. The domain of the application is the company or place of implementation where the place has multiple meeting areas, both formally defined by the users, and importance values for users and meeting types. The system will be mainly used for scheduling meetings by taking the initiator's set as well as participants' preference set of dates as input and use them to generate a list of date /time on which most of the participants agree to attend the meeting. The system will be developed as a web based application as it has to cater the needs of distributed clients.

1.4 Definitions, Acronyms, and Abbreviations

Terms	Our Understanding
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WMS	Web based Meeting Scheduler
Administrator	Admin is a privileged user who is responsible for managing user accounts and managing resources (ex. adding or removing users, rooms, equipment, etc).
User	A user is a person who directly interacts with the system. A user can have different roles with respect to the system (e.g. administrator, mediator, regular user) and meeting events (e.g. initiator, attendee, active participant, or important participant).
Attendee	a user, who receives a meeting invite, and is responsible for either accepting or declining the invite. In the case the invite is accepted, the attendee is the attendee is required to provide an exclusion and preference set. An attendee can be further classified as important and an active attendee
Meeting Initiator	A participant of some representative in-charge of meeting initiation
invite	A meeting request sent by an initiator or representative to the potential attendees, which includes meeting topic, date range and requires attendees to respond with their preferences regarding date. For active participants the invite will require the attendee to provide equipment requirements. For important participants the invite will require the attendee to provide location preferences.
Meeting activities scheduling	The tasks required in order to schedule a meeting. These usually involve the following tasks: planning the meeting, sending the invites, monitoring the responses, resolving conflicts, and confirming the final arrangements.
Nomadcity	The ability to move from one location to another and start communications from any location.
Date range	Time interval specified by the initiator in which the meeting should take place, this also serves as the boundaries for the exclusion and preference sets.
Date set	a pair of input values, including calendar date and time period.
Time interval	a period of time with defined limits. For the purposes of the system, limits are defined in 15 minutes increments (e.g. 8:15 am, 8:30 am, 8:45 am & 9:00am)
Preference set	A set of dates on which the participants would prefer the meeting
Exclusion set	A set of dates on which the participants cannot attend the meeting
Active Participant	Plays active role in the meetings. May be required by the meeting initiator to provide special equipment requirements in the meeting locations. This term is used interchangeably as participant.
Equipment	Any type of resource (e.g. projector, microphone, etc) that can be used in a meeting or event. They are further classified as movable or fixed. Movable equipment refers to equipment that can be transported from one location to another without requiring technician (hardware technician, electrician, handyman, etc) intervention. Fixed equipment refers to equipment that is assigned to a location (overhead projector, podium microphone, etc) wherein moving it to another location involves an installation that requires technician intervention.
Important Participant	Plays an important role in meetings. May be required by the meeting initiator to state preferences about the meeting location.
Meeting Proposal	An invitation to the meeting including meeting topic, date range and duration that is sent to a list of potential participants
Date Conflict	A conflict when scheduling a meeting where no common date could be found
Weak conflict	This occurs when dates can be found within the date range and outside all exclusion sets, but no date can be found which coincides with all preference sets.
Strong conflict	This occurs when dates can be found within the date range and outside all exclusion sets, but no date can be found which coincides with all preference sets.
Location conflict	This occurs when the available locations do not coincide with the preferred locations.

Concurrency	The ability to handle more than one meeting requests at same time.
Virtual meeting	A meeting for which a meeting place which corresponds to a non-physical location where the meeting could take place (e.g. teleconferencing).
UML	Unified Modeling Language
Virtual Meeting	A meeting held simultaneously at multiple remote locations e.g.: Teleconferencing

1.5 References

Some part of this document refers to the following document:

http://www.utdallas.edu/~chung/SAMPLE/ex_vision.htm

<https://www.utdallas.edu/~chung/RE/vision-doc-UTDCS-17-04.pdf>

2 Positioning

2.1 Business Opportunity

A facility for scheduling meetings can be used in many applications such as scheduling courses and flights, room assignments at hospitals and hotels, scheduling national and international meetings, logistics, job scheduling in production systems, as well as command and control systems. The particular type of systems this project is intended for is supporting people to schedule their meetings. Current procedure for meeting scheduling involves numerous interactions among meeting attendees and incurring higher cost in terms of time and effort. The availability of an efficient system to organize meeting stands as concrete proposition in context to current market sphere. The system may allow a patron to organize a meeting with additional functionality to talk terms over participant expectations for resources and location flexibility. As a whole, the system offers efficient scheduling of a meeting. Web based Meeting Scheduler is aimed towards organizations with frequent meeting scheduling, organization, and administration needs. The WMS will facilitate meeting management for both traditional and distributed meeting styles to meet the needs of modern work environments.

2.2 Problem Statement

The problem of	Complexity in meeting organizing, not efficient process
Affects	Any organization or an individual who needs to organize meetings.
the impact of which is	<ol style="list-style-type: none"> 3 All participants are not easily reached. 4 Date and location conflicts and difficult to resolve. 5 Re-scheduling and/or cancellations require additional effort. 6 Scheduling of large meetings is very difficult and time consuming and may require numerous calls to every person. 7 Delay and ultimately improper resource utilization 8 Entities spend a significant amount of time and resources organizing meetings 9 Too many negotiations

	10 The effects of all the factors above are amplified as the number of participants' increases.
a successful solution would be	An accessible, cost-effective meeting scheduler that can be used to initiate and schedule meetings. It will contact and collect participant availability data. Aid the user to decide on the meeting arrangement by ranking alternatives based user configurable criteria The product would also address issues related to conflict in dates and provide an efficient method to solve any such problems It will allow for re-planning and support interactions for negotiation activities.

2.3 Product Position Statement

For	Organizations or an individual
Who	need to schedule meetings efficiently and with minimal interaction and conflicts and satisfy there goals.
Meeting Scheduler System(WMS)	is a web-based software system
That	Has the following features: <ul style="list-style-type: none"> ✓ Online – so easy to send and receive meeting requests, is a web-based system and provides maximum accessibility. ✓ Provides mechanism for resolution of conflicts. ✓ Has a feature of scheduling virtual meetings ✓ Has a feature of allowing the important and an active participants to attend the partial meetings
Unlike	Other meeting schedulers in the market which do not provide conflict resolution and are not web-based.
Our product	Caters to the market which needs a distributed application and provides security features needed by such a system. It is suitable for both large and small organizations because it addresses features ranging from cost-effectiveness to scalability

3 Stakeholder and User Descriptions

3.1 Market Demographics

The target market includes organizations with members or subdivision distributed across several geographic locations. The users are expected to be familiar with basic computers usage tasks. It is looking to enter this new market with the WDS. Scheduling meetings between groups of people can often be difficult. Everyone is often operating on different schedules and finding free time can be a tough task. Back-and-forth phone calls or e-mails among desired participants can be confusing and stressful to meeting organizers. Our project aims to relieve this stress, by providing a system that will keep track of users' schedules and create meetings when people are available, we aim to not only reduce the stress level involved in organizing meetings but also let our customers spend more time on important and constructive tasks rather than spending on organizing meetings.

3.2 Stakeholder Summary

Name	Description	Responsibilities
Omni Soft Inc	This stakeholder that contracted a requirements engineer of a consulting firm to refine the scheduling meeting system requirements.	Ensures that the consulting firm provides such a facility which would outperform any other software vendors that is currently available in the highly competitive market. Ensure that the consulting firm will come up with detailed requirements description that captures customers' real needs and wants as precisely, concisely and conceptually as possible
Requirement engineers	This is a stakeholder that works with the stakeholders to gather their needs. and delimiting and correctly translate requests/needs into	Collects requirements and elaborate it
Project manager	Leads the system development from a management	Plans, manages and allocates resources, specifies priorities, coordinates interactions with customers and users, and keeps the team focused. Also establishes a set of practices that ensure the integrity and
Software architecture	Responsible system development from a technical perspective.	Creates software architecture artifacts, derived from key technical decisions that constrain the overall design and
Design Team	Implements and produce actual software products.	Generates software artifacts according to the design. Follows the project process.
Testing team		Ensures that the system is works correctly and fulfills the design specifications. Generates test plans and procedures. Documents and report bugs encountered. Follows the project process.
Maintenance team	Responsible for resolving problems with software after released.	Generates software patches of fixed to resolve problems (non-related with installation of configuration) with system between releases. Generates software patch installation procedures. Documents changes and updates design documents to reflect changes. Follows the project process.
Market analyst	assist our abilities to position our product successfully	Ensures that there is going to be a market demand for the

3.3 User Summary

Name	Description	Responsibilities	Stakeholder
Organization or Employee	End user	Initiate meeting, re-schedule meetings send requests, respond to meetings invites, view meetings, send/receive meeting confirmations, specify contact information, assign representative, negotiate/solve conflicts ,Provide date ranges (exclusion sets and preference sets.), notify participants, confirm attendance, and view meeting's agenda.	Self

Administration	End user	In addition to the regular User responsibilities. Manages user's accounts, locations and equipment. Installs, repairs, starts and stops system.	Self
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3.4 User Environment

The Meeting Scheduler System is a web based application; hence it can be used by the users from any place from where the internet is accessible. The system is developed using Java and JSP, hence the system is versatile and can run in a various environments. System will follow client-server architecture there are two operating environments to be consider client and server side. The client-side is platform independent and only requires web browsing capabilities. The server-side platform requirements correspond to those of the underling application server (Microsoft IIS 6.0 Web Server). Users are expected to access the system through a browser-enable device and have network access to server. System administrators depending on the task are expected to access the system remotely through its web interface or locally.

The WMS interacts with:

- Microsoft SQL Server for database interactions.
- Microsoft IIS 6.0 Web Server to deliver HTML content to clients.
- Microsoft Exchange Servers e-mail notification and calendar synchronization.

3.5 Stakeholder Profiles

3.5.1 User

Representative	N/A
Description	A commercial individual that will use the system to support scheduling and attending meetings.
Type	Business.
Responsibilities	Provide necessary information to create invites and responses.
Success Criteria	The success is completely defined by the customers continuing using our system.
Involvement	We will have sample customers to help evaluate our design and market research results will also guide our vision.
Deliverables	Not specified.

3.5.2 Administrator

Representative	N/A
Description	A commercial individual that will task managing and maintaining the system
Type	Expert.
Responsibilities	Perform system maintenance; manage user and resources over all system availability and usage.
Success Criteria	The success is completely defined by the customers continuing using our system.
Involvement	We will have sample customers to help evaluate our design and market research results will also guide our vision.
Deliverables	Not specified.
Comments / Issues	Not specified.

3.5.3 Omnisoft Inc

Representative	N/A
Description	The company who will develop WMS
Type	Experienced in developing web based information system
Responsibilities	Developing, testing and maintaining the system. Selling the system to customers and providing support
Success Criteria	The software system is successfully released within a certain amount of budget and time. The software system is sold to a massive number of customers and makes a certain amount of profit.
Involvement	Analysis and Design Implementation Test

	Project Management Environment Configuration and Change Management
Deliverables	Prototype
Comments / Issues	none

3.5.4 Customer

Representative	N/A
Description	Organization that will purchase and use the WMS system
Type	Experienced in use similar information management system
Responsibilities	Deploy the system to current IT environment and do regular maintenance
Success Criteria	The system improved the productivity of the employees. Important meetings can be ensured
Involvement	Customer that will purchase the software
Deliverables	None
Comments / Issues	none

3.5.5 Requirement Engineer

Representative	N/A
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Description	Analyze system and specify requirements
Type	Expert in requirement engineering
Responsibilities	Following the Unified Process, generate related documents
Success Criteria	Make qualified deliverables based on the Unified Process
Involvement	Business Modeling Requirements
Deliverables	none
Comments / Issues	none

3.5.6 Developer

Representative	N/A
Description	Design, Implement, review and unit test the software system
Type	Expert in development of similar software system
Responsibilities	Design, implement and unit test for the system
Success Criteria	The system is well designed and implemented
Involvement	Analysis and Design Implementation Test
Deliverables	None

Comments / Issues	None
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3.5.7 Tester

Representative	N/A
Description	The person who will test the software system
Type	Expert in testing similar software system
Responsibilities	Test the software system and report bugs
Success Criteria	Discover as more bugs as possible to ensure the quality of the software
Involvement	Test
Deliverables	None
Comments / Issues	None

3.5.8 Maintenance

Representative	N/A
Description	Maintain the software system
Type	Experience in maintain similar software
Responsibilities	Maintain the WMS after release
Success Criteria	Defects discovered after release can be quickly fixed

Involvement	Implementation Test
Deliverables	None
Comments / Issues	None

3.6 User Profiles

3.6.1 End User

Representative	N/A
Description	End user of the WMS
Type	Familiar with similar web based information management system.
Responsibilities	Use the WMS to help scheduling meetings.
Success Criteria	Meetings can be scheduled quickly Conflicts can be kept minimal Important meeting are ensured.
Involvement	End User
Deliverables	User manual/help
Comments /Issues	None

3.6.2 Administrator

Representative	N/A
Description	Administrator of the WMS
Type	Experienced in maintain and deploy web based information management system.
Responsibilities	Deploy and do regular maintenance for WMS
Success Criteria	All administrator operations should be done quickly
Involvement	System administrator
Deliverables	Deployment manual
Comments / Issues	None

3.7 Key Stakeholder or User Needs

Need	Priority	Concerns	Current Solution	Proposed Solutions
Schedule meetings	critical	Efficient, easy –to-use, accurate, faster &, optimized	Use of one competitor software or simply email interaction.	Provide a invite form were the users feeds the specific information for an appropriate meeting invitation
Respond Meetings	critical	Efficient, easy –to-use, accurate, faster &, optimized	Use of one competitor software or simply email interaction	Provide an invite response were the users can specify the information required for an appropriate response
View meeting schedule	high	To Obtain an accurate and up-to-date information.	Use of one competitor software or simply email interaction	Provide a calendar view in the application were the user can view his/her meetings.
Conflict Resolution	high	Rapid & efficient conflict resolution with minimum negotiation	Email interaction, phone calls or in person.	All interaction will be managed through the system. Introduce concept of mediator.
Accessibility	High	The scheduler should be	None	Web-based scheduler system which is accessible

		accessible by all parties involved even if they are geographically separated		easily over the internet and does not require any special installation.
Ease of Use	High	The system should cater to various categories of users. They might range from users with high, moderate to low levels of expertise in computer systems.	Attempt to create user friendly interfaces.	Model the system in conformation with various web-based systems in use currently. This increases the comfort level of the users to use the system.
Performance	High	Efficient and time saving resolution techniques	None	The negotiation rounds are kept at minimal. There is an upper-bund on the number of iterations it can follow.
Availability	High	The system downtime should ideally be zero to avoid the	Client/Server model where central server failure implies incomplete information and lack of real time update.	The system is web-based and hence the downtime is minimum the www is available with backups.
security	high	Confidentiality, integrity & availability	User name and password	

3.8 Alternatives and Competition

- Microsoft outlook
- IBM Lotus Notes

Product Name	Equipment	Location	Email	Preference set	Negotiation	Exclusion set	Representative set
MS Outlook	X	X	X			X	X

IBM Lotus Notes		X	X			X	X
Google Calendar			X				
WMS	X	X	X	X	X	X	X

4 Product Overview

4.1 Product Perspective

It is web-based meeting scheduler system. It uses login based authentication to enable users to interact with the system.

System Interface

It requires interfacing with an exchange/SMTP server for the e-mail functionality to work. It also requires a database system for storage of information.

User Interface

User interface is a web-browser.

Hardware Interface

The system requires no additional hardware interfaces.

4.2 Summary of Capabilities

Customer Benefit	Supporting Features
Efficient to schedule meetings	Users can provide the meeting data and system will provide suggestions on potential date/location options. The system will distribute meeting invites and collect all responses.
Information privacy	Login based security enables different users to have different and private profile views.
Information exchange	The e-mail feature enables user and all concerned to be informed about changes and updates in a timely manner.
Support for conflict resolution	Users can choose from several conflicts resolution options including mediation and conventional methods. The system will support conflict resolution by managing user iterations and providing special privileges to the initiator user.

Additional information	It provides a facility to add personal notes to each meeting instance which is visible only to the user who chooses to add any such notes.
Request resources	The equipment request functionality helps users request for any additional equipment necessary for the meeting apart from the standard items.

4.3 Assumptions and Dependencies

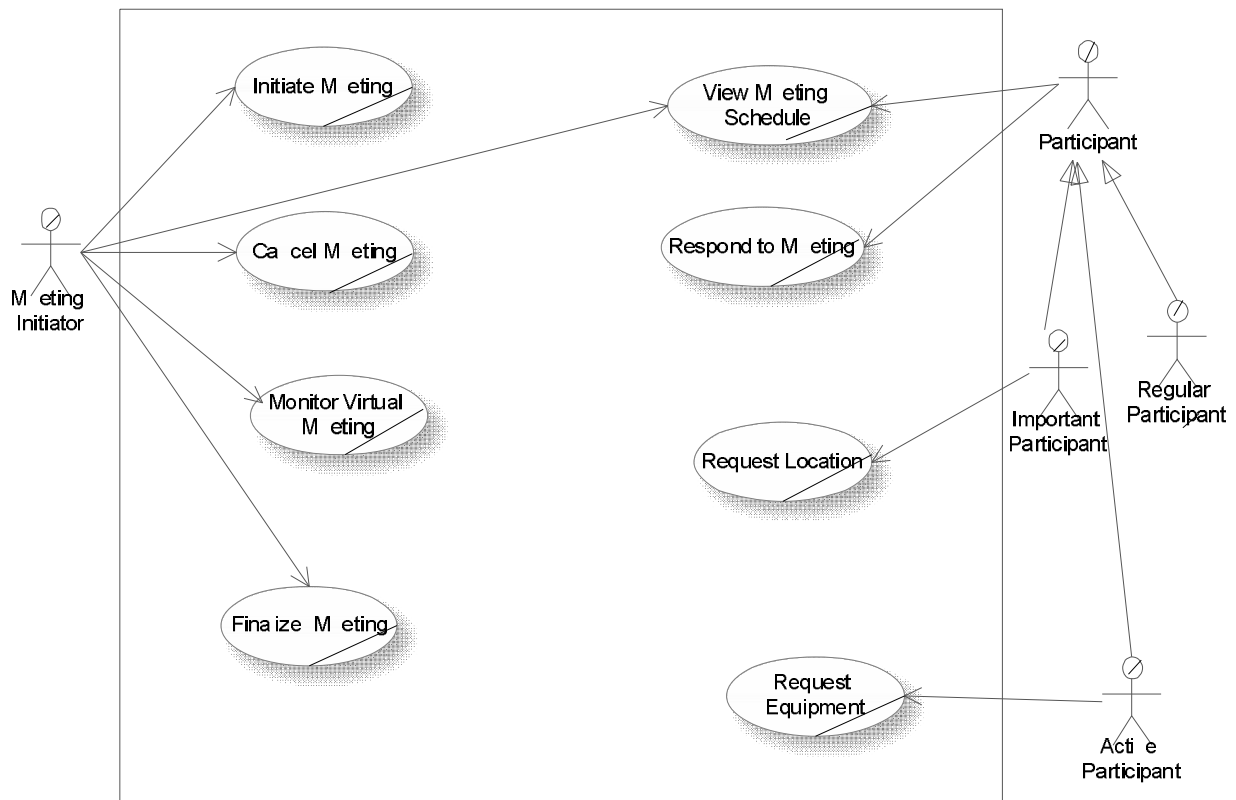
- The Meeting Scheduler System shall schedule the meeting automatically. However, the priorities of the participant are up to the choice of the initiator.
- The Meeting Scheduler System shall provide meeting priorities as low, medium and high but if a conflict arises between two meetings, the initiators of those meetings contact personally to resolve the conflict.
- The Meeting Scheduler System being a web based application can be used anytime and from anywhere where there is internet access. The system can also be accessed locally via company's intranet.
- The Meeting Scheduler System assumes that the users shall be conversant with basic windows applications.
- It is assumed that the organization will operate and support the Microsoft SQL Server 2008.

4.4 Licensing and Installation

WMS is a web-based system. Hence it does not require any specific installation. However the system can be used only when an organization or enterprise purchases membership.

5 Product Features

5.1 Business Use case diagram:



5.2 Business Use case description

Initiate Meeting	
ID	1
Brief Description	Meeting initiator wants to initiate a new meeting
Primary Actors	Meeting Initiator
Secondary Actors	WMS
Precondition	User is logged in as a meeting initiator.

Main Flow	<ol style="list-style-type: none"> 1. The meeting initiator signs in the system. 2. The meeting initiator enters the meeting agenda, meeting duration and the proposed meeting date range with a start date and an end date. 3. The meeting initiator also fixes a freeze date. 4. The meeting initiator adds participants. 5. The meeting initiator sets roles 6. The meeting initiator gives deadline to participants to respond. 7. the meeting initiator submit the request.
Post condition	Meeting Initiator sends new meeting request to all participants and confirms the meeting after resolving the conflicts.
Alternative Flow	None

Cancel Meeting	
ID	2
Brief Description	Meeting initiator wants to cancel the meeting if conflicts not resolved.
Primary Actors	Meeting Initiator
Secondary Actors	WMS, Important Participant, Active Participant ,Potential Participant
Precondition	User is logged in as a meeting initiator and still there is a conflict.
Main Flow	<ol style="list-style-type: none"> 1. The meeting initiator signs in the system. 2. The meeting initiator enters the why the meeting has to be cancelled. 3. The meeting initiator cancels the meeting.
Post condition	System notifies all participants about cancelled meeting.
Alternative Flow	None

Finalize Meeting	
ID	4
Brief Description	Initiator wants to finalize meeting whose conflict is resolved.
Primary Actors	Meeting Initiator
Secondary Actors	WMS, Important Participant, Active Participant, Potential Participant
Precondition	Meeting is not finalized.
Main Flow	<ol style="list-style-type: none"> 1. Initiator signs in the system. 2. System displays replies from various participants. (This replies include participant name, participant type, result (accepted or refused), preferred date and exclusion date) 3. Initiator click the resolve button. 4. System displays the result that was obtained based on the meeting satisfying criteria (5. Initiator Finalize the meeting 6. System sends the information about the meeting details
Post condition	Meeting is finalized.
Alternative Flow	None

5.3 Feature description

Login

The end users should use their credentials to again access to the system. This is done to keep the users and meeting information secure.

Schedule Meeting

This feature allows the initiator to schedule a new meeting. The initiator enters the meeting agenda, venue and participant details, which the system takes into account for generating a new meeting request and notifying the participants.

Virtual Meeting

Using this feature, the initiator can invite participants for a virtual meeting

View Meeting Results

Using this feature, the meeting initiator can view the results of the meetings he/she has initiated and decide whether to confirm the meeting or renegotiate meeting.

View Meeting Invites

The potential participants who are invited for the meeting can view the new meeting invites and record their availability status using this feature.

Other features of the product are:

- Cancel meeting
- Collect user responses
- Send remainder message
- View location
- Finalize meetings
- Manage virtual meetings
- Manage Users
- Manage equipment
- Resolve conflict

6 Constraints

6.1 Usability

The meeting Scheduler System is very user friendly and easy to use software that provides a variety of features in a simple manner to improve usability.

6.2 Responsiveness

The system responds quickly to user requests (like confirming a meeting, resolving conflicts, sending meeting requests). The system confirms from the user before executing some of his/her requests.

6.3 Security

The system includes security features such as access control, data integrity and data privacy. The system authenticates the user using a login and a password. The system also uses form based authentication for security over the web.

