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DEPARTMENT OF COMPUTER SCIENCE ENGINEERING
JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY
WAKNAGHAT

EVENT & ACTIVITY MANAGER

(Version 1 & Version 2)



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DEPARTMENT OF COMPUTER SCIENCE ENGINEERING
JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY-
WAKNAGHAT
MAY-2009

**DEPARTMENT OF COMPUTER SCIENCE ENGINEERING
JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY-
WAKNAGHAT**

CERTIFICATE

This is to certify that the work entitled, "*Event and Activity manager*." submitted by *051227,*
051235, *051260,* *051231* In fulfillment for the award of degree of Bachelor of Technology in Jaypee
University of Information Technology has been carried out under my supervision.

Schandra

Satish Chandra
Dept. of Computer Science & Information Technology
Jaypee University of Information Technology

[Red scribble]

Acknowledgement

We have been entrusted to write this project “Event and Activity Manager” as a part of our internship which has been a great learning and experience for us.

We would like to thank E&R department of Infosys for their constant guidance and support during the project execution.

We would also like to thank our project coordinator Mr. Satish Chandra as he been a constant source of learning.

Last but not the least a word of thanks to our project lead from Infosys Mr. Vishwamurthy Sangam without whom the project wouldn't have been completed.

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1. ABSTRACT

In order to conduct event scheduling and send notifications corresponding to each event via email and have an alarm tone play for a specified time, at a specified time before the event. In order to manage the regular activities in the company using an easy-to-use activity manager with that stores activity details for each activity.

Both the above specified application modules will be part of the Event and Activity Manager. The aim of this application software is to provide the user an interface to set events, remind the user about the events through emails to the User's Inbox and application based alarms which are different from the Outlook built-in reminders, without having to use the Microsoft Outlook for the same.

1.1 REQUIREMENTS IN SCOPE

- Of the numerous activities, many activities of the user which are personal should be maintained separate from official activities in the activity manager.
- The activity manager should be display the activities even after a system restart, and should remove the activity from display after it is deleted.
- The event manager should display all the events that still have not happened or have not marked complete. The past events should be stored in a log. All the deleted events should be moved to thrash and should be recoverable on a click of a button, which should be the only option other than permanent deletion of that event, as long as it is in thrash.

12. REQUIREMENTS OUT OF SCOPE

- The email sent as an event reminder should at least have the name of the event along with its date and time.
- To design an easy-to-use interface for managing events in the system itself.
- Notification of the past events.
- To check official as well as personal activities of the user.
- Each activity when deleted goes into the trash from where it can either be permanently deleted or be viewed. The user should not have any other option, even for recovery.
- Past activities and future events should be displayed only if official.

2.11/TECHNOLOGY USED

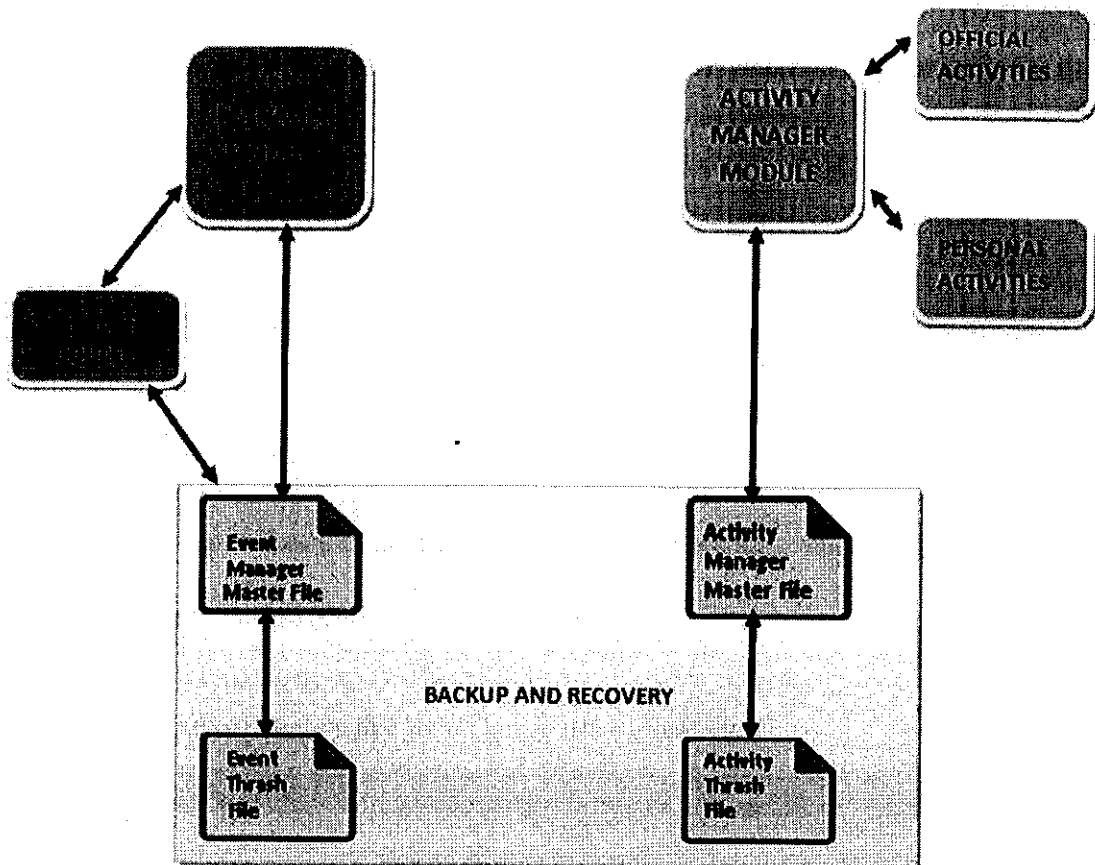
Hardware Used

Processor/RAM/HDD : Intel Processor/512MB RAM/40GB HDD
Database Server : Local system flat files

Software Used

Microsoft .Net Framework 3 and above
Object Operating System : Windows XP Service Pack 2 or Windows Vista
Third Party S/Ws : Microsoft Outlook 2007
IDE Used : Microsoft Visual Studio 2008

3. ARCHITECTURE



ARCHITECTURE EXPLANATION:

The system is divided into two modules which work separately.

1. Event Manager Module stores and retrieves its Events from Event Manager Master file. The Event Manager Master File contains information like Event Name, Event date, Status Flag etc. in binary format. The Send Mail Module contains a timer which internally checks the time and Date of these events and sends mail to the User at the specific time. Those events which were requested by user to be deleted have their Status flag as disabled. The old events get stored automatically in the Event Thrash file.

2. The activity manager is basically divided into two parts:
 - 2.1 Official Activities: These are the activities which basically stores/edits/deletes the list of daily official work. User can add 3 pages of Official activity namely Current days activity, Yesterday's activity and Tomorrows Activity.
 - 2.2 Personal Activities: It stores/edits/deletes only current days activity in a file.

EVENT MANAGER

1. FUNCTIONALITY OVERVIEW

The component is able to add/edit/delete event as per requirement. The module contains the following functionalities.

Add Event: Saves the entire event information in a flat file.

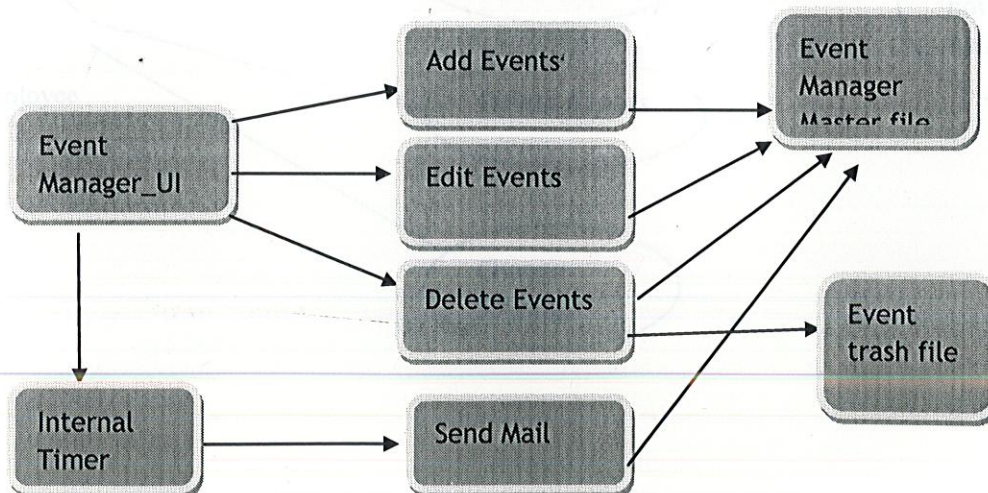
Edit Event: Search an existing event from the file and modifies the event details according to user input.

Delete Event: Sets the event as disabled in the flat file.

Send Mail: Finds the event information to be sent at a particular time and send it to the specified user via Email.

Settings: Sets global parameters like font/ change users email etc.

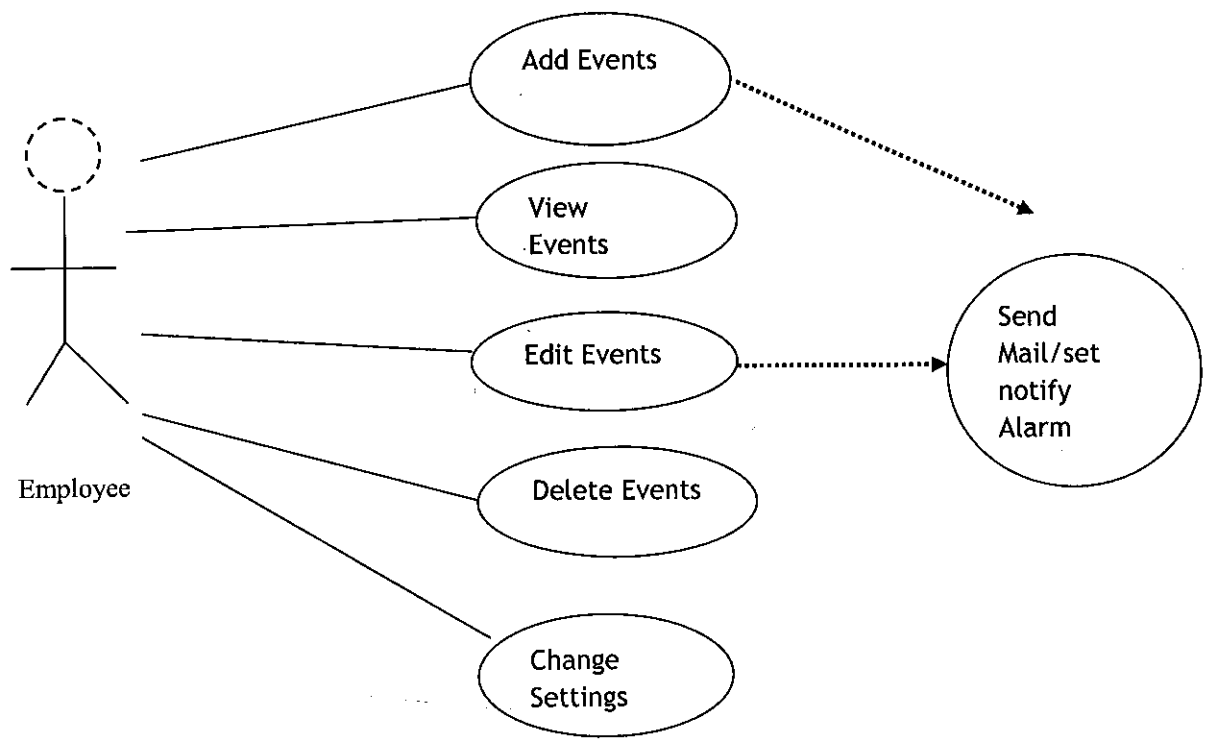
2. HIGH LEVEL ARCHITECTURE



③

Event Manager Module calls the functions add/edit/delete events as per the user which can trigger any of the events. The add/edit/delete events use the Event manager master file. The send mail function is however triggered by internal timer which periodically checks the Events time and date with system time and if it matches it sends the mail.

3. USE CASE DIAGRAM

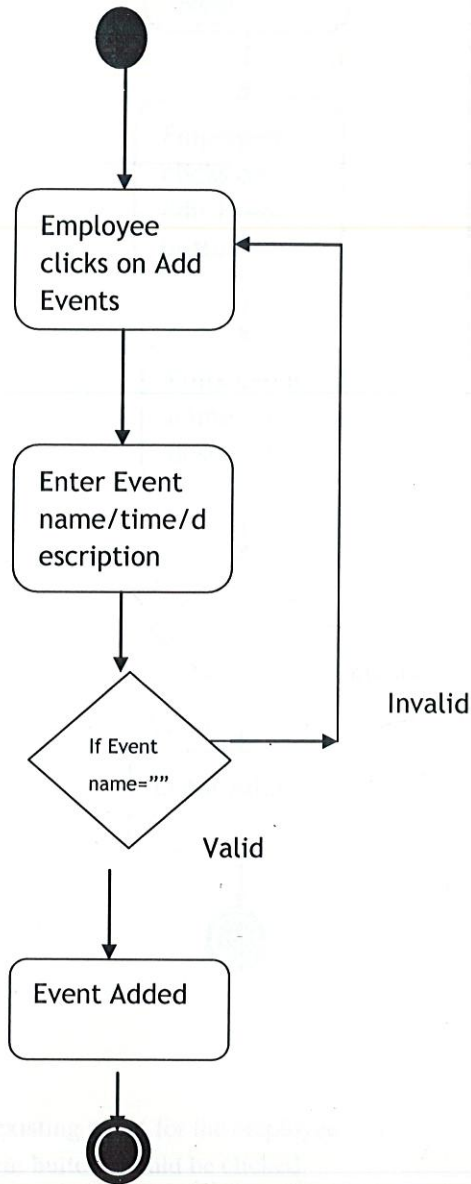


3.1.1. USE CASE DETAILS

Use Case Name	Event manager
Actors	Employee
Description	Employee clicks on event manager button to manage any events. He can view already existing events He can add/edit/delete events.
Pre-Conditions	The Event Manager button should be clicked
Normal Flow of events	Employee Clicks on Event Manager button. He can view events/add/edit his events, delete events and can change settings. After adding/editing events he will be able send mail or get notification as per his requirement.
Alternate flow of events	N.A.
Post Conditions	N.A.

4. ACTIVITY DIAGRAM (LOGIC FLOW DIAGRAM)

Add Event



Name: Add Event

Description: Adds a new event for the employee

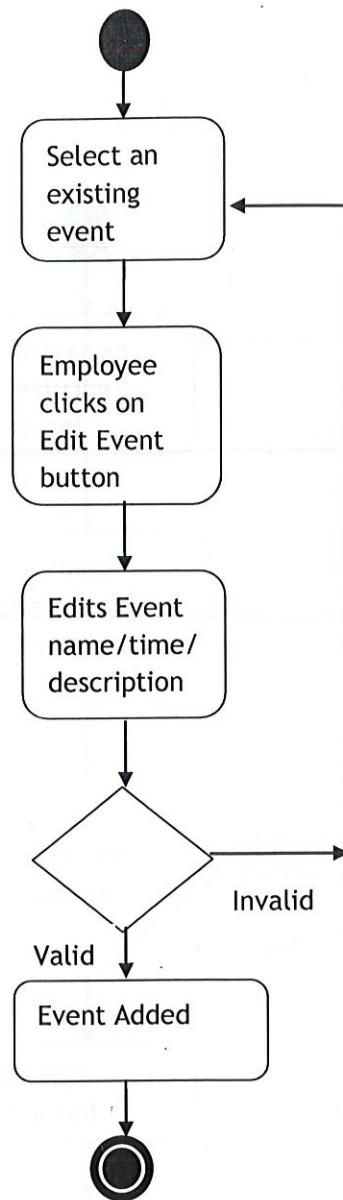
Precondition: Add event button should be clicked

Normal Flow of Events: Employee clicks on add event. He enters event name/time and description. If the details are valid then the event is added in the list of Events in the event viewer.

Alternate Flow of Events: None

Post condition: None

Edit Event



Name: Edit Event

Description: Edits an existing event for the employee

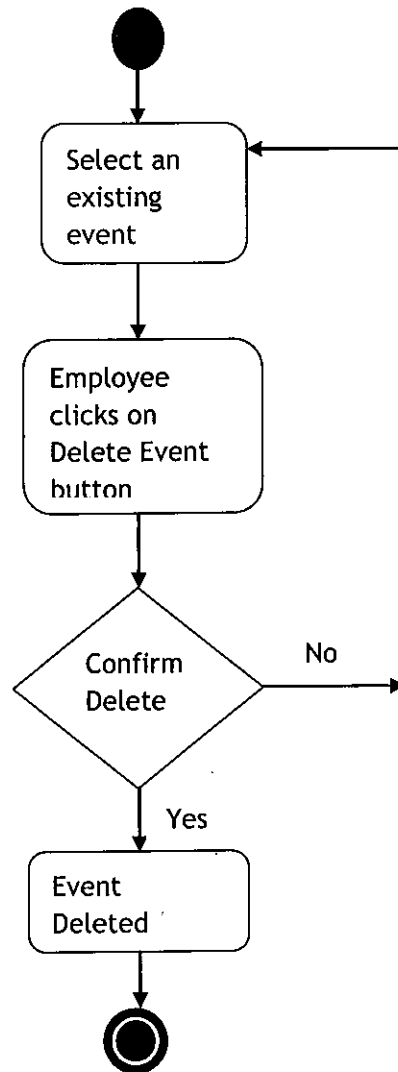
Precondition: Edit event button should be clicked

Normal Flow of Events: Employee clicks on edit event. He edits event name/time and description. If the details are valid then the event is added in the list of Events in the event viewer.

Alternate Flow of Events: None

Post condition: None

Delete Event



Name: Delete Event

Description: Delete a selected event for the employee

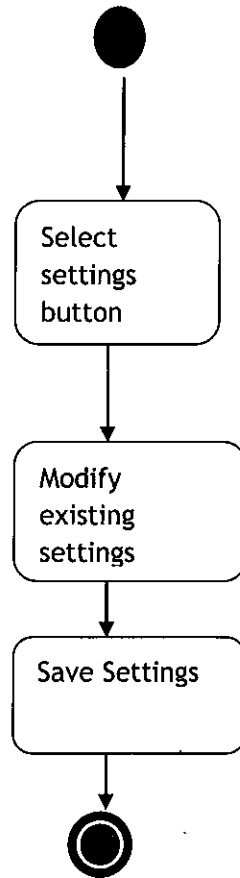
Precondition: Delete event button should be clicked

Normal Flow of Events: Employee clicks on Delete event. The action is asked for confirmation. If user confirms delete the event is removed from the Event List

Alternate Flow of Events: None

Post condition: None

Settings



Name: Settings

Description: Helps employee to select/change the settings

Precondition: Delete event button should be clicked

Normal Flow of Events: Employee clicks on Delete event. The action is asked for confirmation. If user confirms delete the event is removed from the Event List

Alternate Flow of Events: None

Post condition: None

5. CONFIGURATION FILES

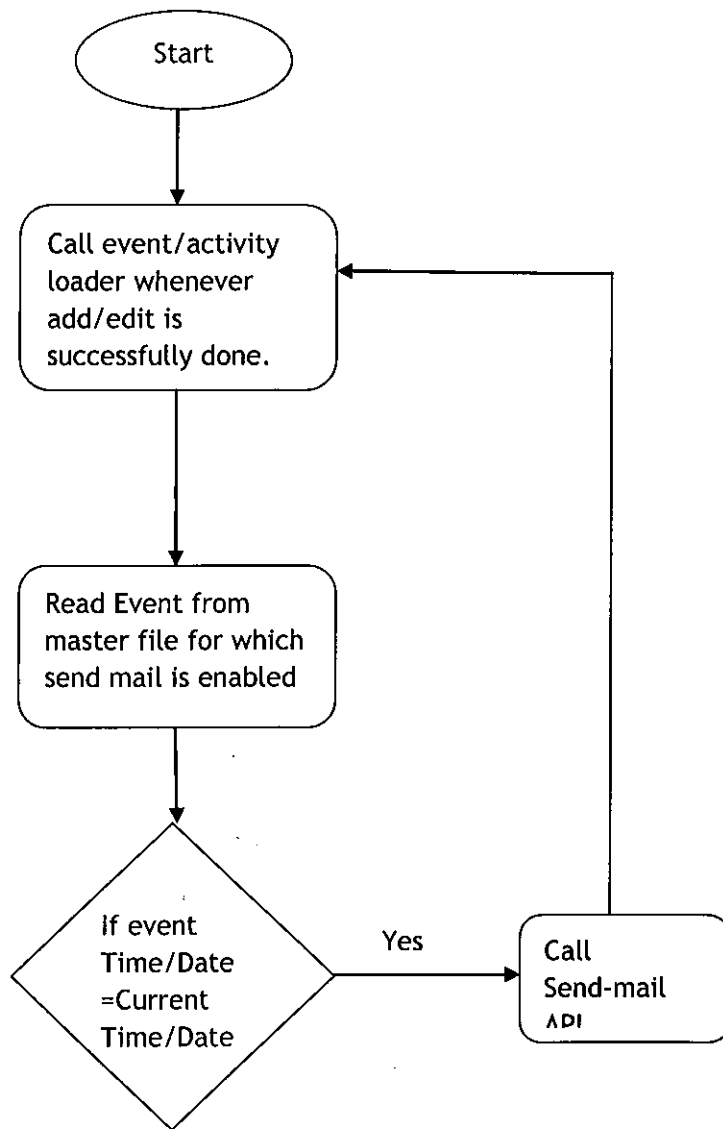
There is only one configuration file available for both event and activity manager. The configuration file stores the following details in binary format.

Color Code	Font	Employees Email Address	Enable/Disable alarms	Delete Old events after certain days
Specifies the background color of the event manager list. Default is white	Specifies the font which should be used to display events. Default is MS Sans Serif	Specifies Employees current email address	Setting to enable/disable the alarms	Specifies no. Of days after which a particular event will be deleted

6. PROCESSING LOGIC

The internal timer runs as a background process and is initiated when any event is added or edited which checks the system date and time with the date and time of the events stored in the file. If date and time matches with the current date and time for any particular event.

Mail/notification corresponding to that event is sent. The following flowchart represents how the internally the timer works.



7. EXCEPTION HANDLING

All exceptions are handled by a section of code specified by label EventErrorHandle. Whenever error occurs the control is transferred to the section of code specified by the label EventErrorHandle.

8. ERROR MESSAGES

The various Error Messages that can be found while running the application are:

1. Error. File not Created: This error message is displayed when the application is unable to create a file on the local disk
2. Error. Unable to send mail: This error message is displayed when the event manager is unable to send email because of any external problems like internet connectivity
3. Error. File read/write: If any event is not successfully added or deleted this error message is generated.
4. Error. Unable to load settings. Defaults loaded: If the settings are not successfully loaded on form load this error message is generated and loads the form with default settings.

9. ASSUMPTIONS

The assumptions that have been taken into consideration are as follows:

1. The internet connection is working.
2. Microsoft outlook is preconfigured.
3. The system has to be running in the windows system tray all the time.

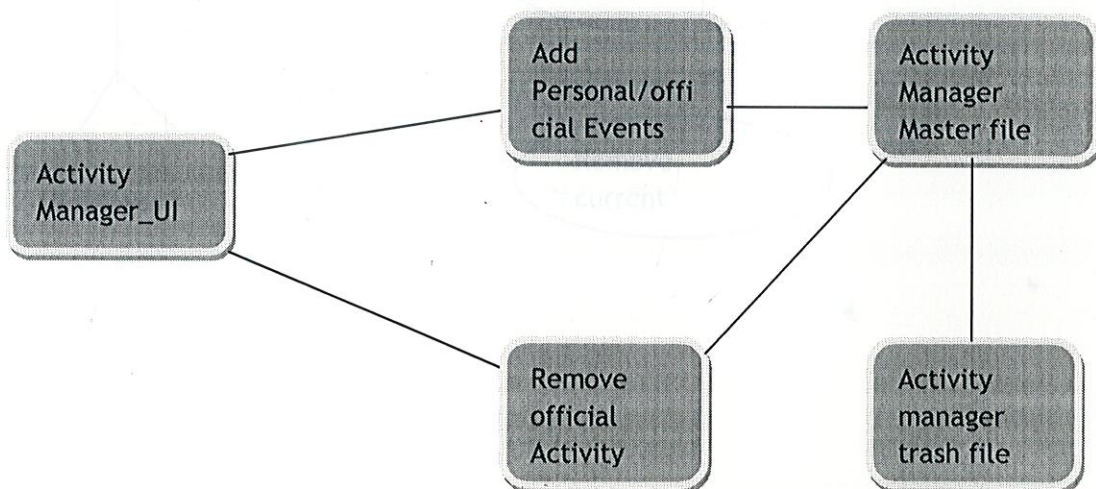
ACTIVITY MANAGER

1. FUNCTIONALITY OVERVIEW

The component is able to add/edit/delete daily official and personal work. The module contains the following functionalities.

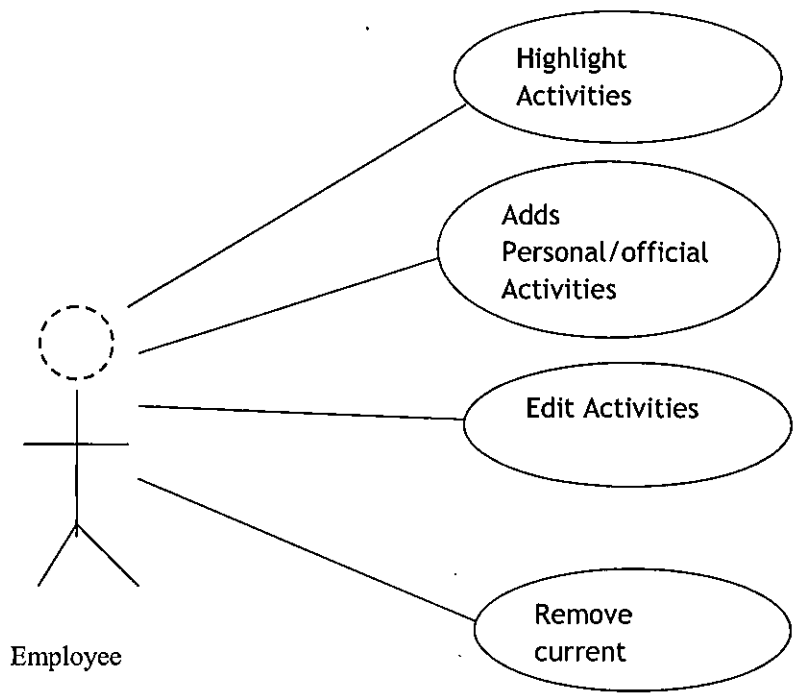
1. **Load Activity:** loads all the activities for the current day on form load
2. **Add Activity:** Adds new official or personal activities on the current page
3. **Remove Page:** Deletes the current Activity page and sends it to trash file
4. **Scroll Pages:** Scrolls through current day, previous day and future days official activity page
5. **Settings:** Sets global parameters like font/ change users email etc.

2. HIGH LEVEL ARCHITECTURE



Activity Manager basically has an Activity Manager User Interface with separate tabs for Personal and official activities. The activity manager uses a master file for adding any new personal /official events for the current day. It also stores the official activities of yesterday and tomorrow for a particular day. The older activities are automatically flushed into the Activity manager trash file. If user wants to remove any official activity it moves into the activity manager trash file.

3. USE CASE DIAGRAM

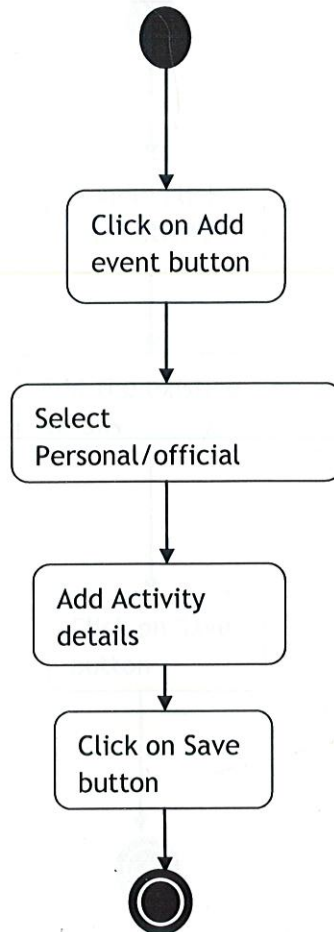


3.1.1 USE CASE DETAILS

Use Case Name	Activity Manager
Actors	Employee
Description	Employee clicks on Activity manager button to manage any events. He can view already existing activity He can add/edit/delete activity.
Pre-Conditions	The Activity Manager button should be clicked
Normal Flow of events	Employee can highlight activity by selecting an activity. Employee can add his personal activities and official activities by clicking on add button.
Alternate flow of events	N.A.
Post Conditions	N.A.

4. ACTIVITY DIAGRAM

Add Activity



Name: Add Activity

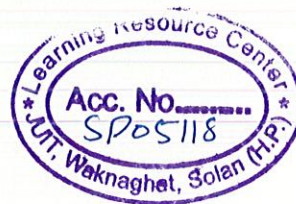
Description: Adds a new activity for the employee

Precondition: Activity manager should be clicked

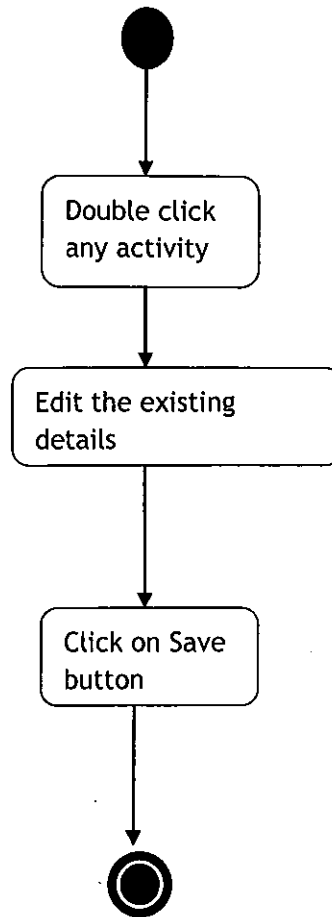
Normal Flow of Events: Employee clicks on add button. He chooses Personal/official activity. He then adds the activity details. Clicks on the save button

Alternate Flow of Events: None

Post condition: None



Edit Activity



Name: Edit Activity

Description: Edits an existing activity

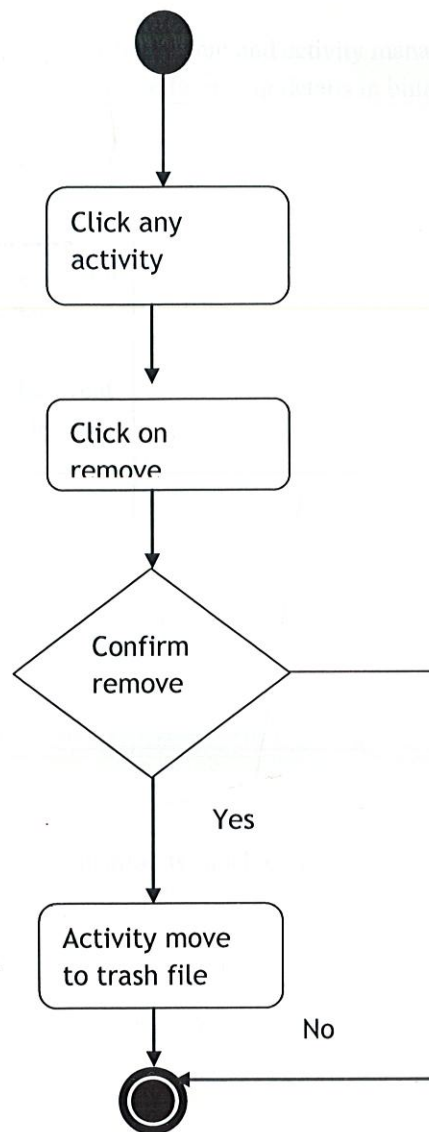
Precondition: Activity manager is selected

Normal Flow of Events: Employee double-clicks the activity manager. He edits the existing activity in the edit window. He clicks on the save button

Alternate Flow of Events: None

Post condition: None

Remove Activity



Name: Remove Activity

Description: Remove an existing activity

Precondition: Activity manager is selected

Normal Flow of Events: Employee selects an activity in the activity manager. He clicks on remove. If remove is confirmed then activity is removed in trash

Alternate Flow of Events: None

Post condition: None

5. CONFIGURATION FILES

There is only one configuration file available for both event and activity manager. The same configuration file for activity manager only stores the following details in binary format.

Colour Code	Tranparency	Delete Old events after certain days
Specifies the background colour of the Activity manager list. Default is white	Specifies amount of transparency the widget is supposed to have.	Specifies no. Of days after which a particular event will be deleted

6. EXCEPTION HANDLING

The following are the exceptions which the application is capable of handling.

- a. File not found exception
- b. File read/write exception
- c. TimerNotSet Exception

7. ERROR MESSAGES

The various Error Messages that can be found while running the application are:

1. Error. File not Created: This error message is displayed when the application is unable to create a file on the local disk
2. Error. Unable to send mail: This error message is displayed when the event manager is unable to send email because of any external problems like internet connectivity
3. Error. File read/write: If any event is not successfully added or deleted this error message is generated.

4. Error. Unable to load settings. Defaults loaded: If the settings are not successfully loaded on form load this error message is generated and loads the form with default settings.

8. ASSUMPTIONS

The assumptions that have been taken into consideration are as follows:

1. The system has to be running in the windows system tray all the time.
2. Personal Activities page cannot be deleted.

4. MODULES

4.1 Event Manager

Adds/Edit/Delete events as per requirement. The module contains list of events which when clicked shows the details of each event. There is also an option while adding an Event to send an email as a reminder before certain hours. The following are the various sub modules of Event Manager.

4.1.1 Add Events

The following describes the high level functionalities of Add Events module:

1. Add events will show an Event Information form which contains fields to enter name, time, date and facility to send email
2. User can enter new event name and set time and date accordingly.
3. The details entered will be validated if the details are valid then data is valid, Add Event saves events data in a flat file in a special format. The file contains a special parameter which tells whether an event is enabled or disabled.
4. Displays all the events enabled in the file for a particular day as per the user settings while the Add events form is loaded.
5. Saves the details in a 'Send Mail' flat file which helps to send email as a reminder at a specific time.

4.1.2 Edit Events

The sub module asks user the name of the event to modify. Edit event will search an existing event from the file and modify the details of the event as per the user requirement.

4.1.3 Delete Events

The system does not allow user to permanently delete any events created. The sub module asks the user to enter the event name. The name is searched in the file and if it is found and is enabled the Delete Events sub module sets the event as disabled in the file.

4.1.4 Send Mail

The send mail sub module is invoked automatically a number of times while the application is running. Send mail searches for those events registered in the 'SENDMAIL' file and calls a mail function to send the Event Name and time to the Email address of the user. After the mail is successfully sent it removes the entry of the Email from the file.

4.1.5 Settings

The settings Sub module provides the following functionality:

1. Sets global parameters like
 - a. Color of the Events display page
 - b. Font of the events display page
 - c. Change users Email
 - d. Events per page
 - e. Enable /Disable sounds Alarms
 - f. Delete old events after certain days
2. When the user changes these settings the settings are saved in a separate settings file.
3. If user asks for default values the module resets all the pre-existing values of the global parameters to the default values.

4.2 Activity Manager

The activity manager is basically divided into two parts:

1. **Official Activities:** These are the activities which basically stores/edits/deletes the list of daily official work. User can add 3 pages of Official activity namely Current days activity, Yesterday's activity and Tomorrows Activity.

2. **Personal Activities:** It stores/edits/deletes only current days activity in a file.

4.2.1 Load Activity

1. The sub module is invoked automatically as the Activity Manager is started and it reads the file which stores the information about the official activity of previous day, current day and the following day as well as the Personal activity of the current day and displays them in their respective sections.
2. It automatically highlights those events which were highlighted previously by the user.

4.2.2 Add Current Activity

Add Activity adds a new activity in the current page. Add activity will not allow modifying previously created activities from the user in that page.

4.2.3 Remove Current Page

1. This is only available in the Official Activities section of the form and allows user to remove current page that is being displayed.
2. The details are saved in a separate thrash files which allows the user to view the deleted page

4.2.4 Highlight Activity

1. The sub module allows a user to High-light/Unhighlight any details from the current page.
2. User is allowed to select color of his choice for highlighting
3. As soon as the detail is highlighted the corresponding color code is modified in the file and vice versa when unhighlighted

4.2.5 Scroll Pages

1. This is available only in the Official Activity section of the Activity manger
2. When the user clicks on the next /previous arrow the module displays the Activities of the respective page
3. The user can scroll through three pages namely Yesterday, Current and Tomorrow.
4. Locks the next arrow if there are no further pages available.

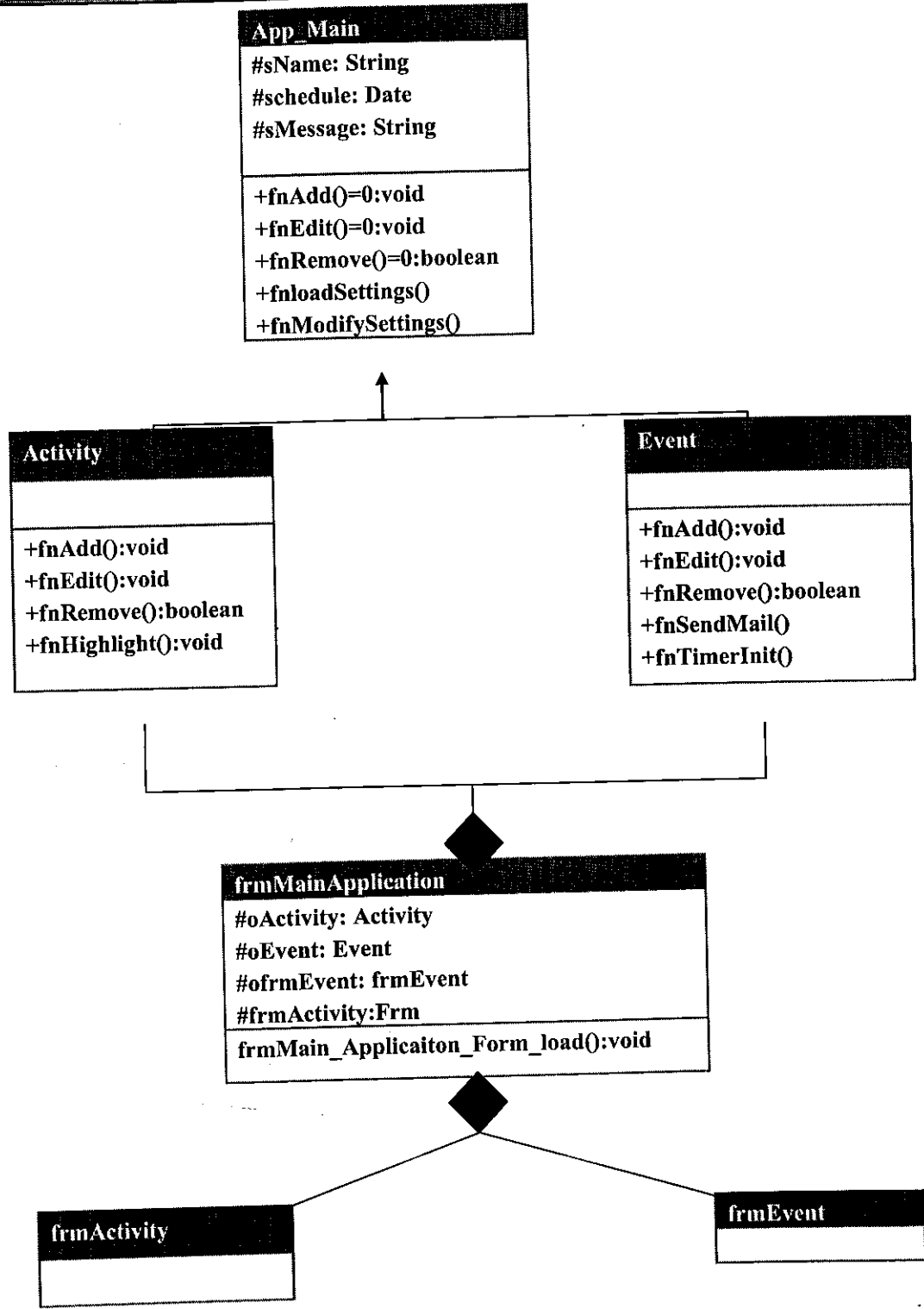
4.2.6 Settings

The settings Sub module provides the following functionality:

1. Sets global parameters like
 - a. Color of the activity display page
 - b. Font of the activity display page
 - c. Delete old deleted events after x days

4.2.7 View Deleted Activity

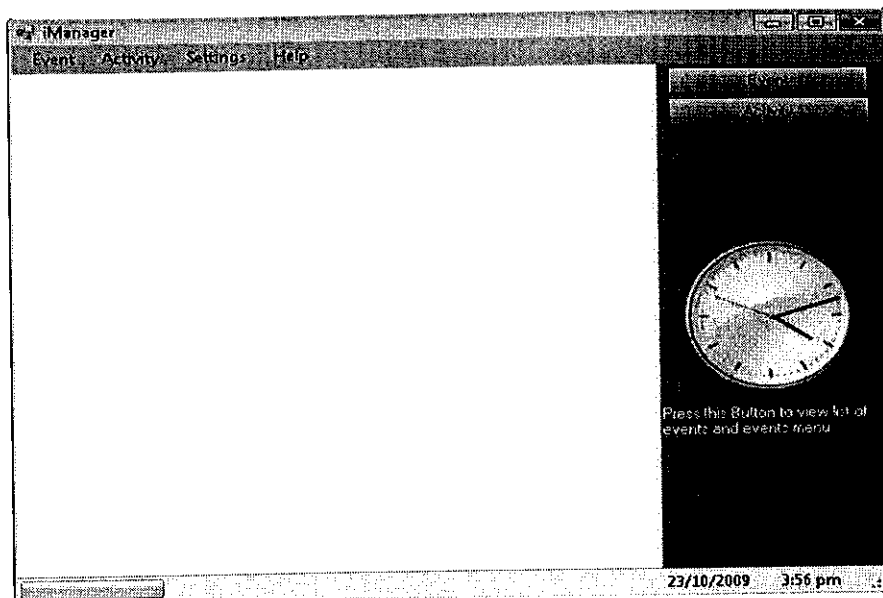
The sub module reads deleted activities from trash file and displays it to user in read only format.



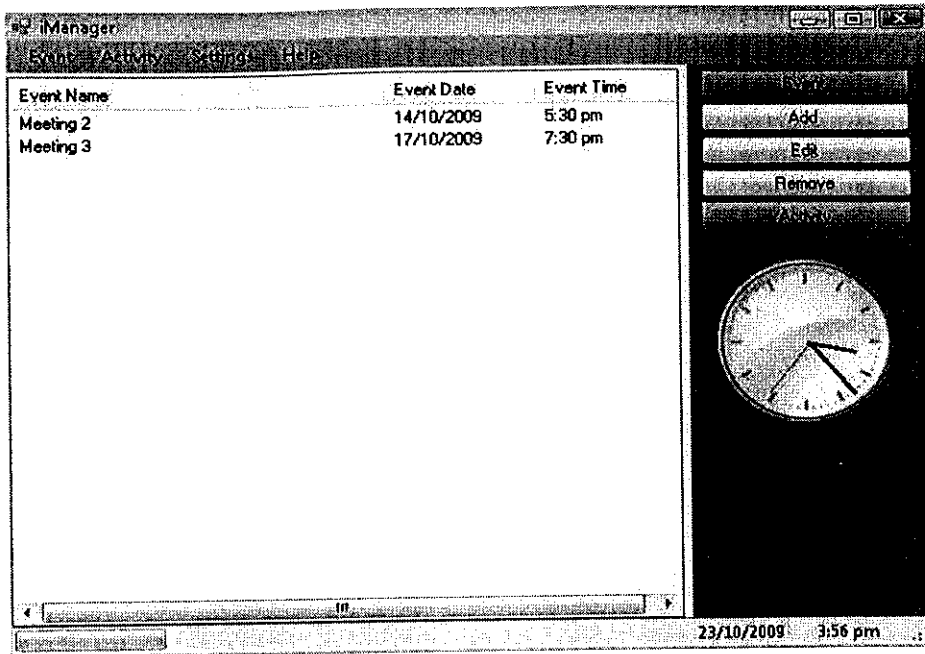
6. SCREEN LAYOUT

Version 1:

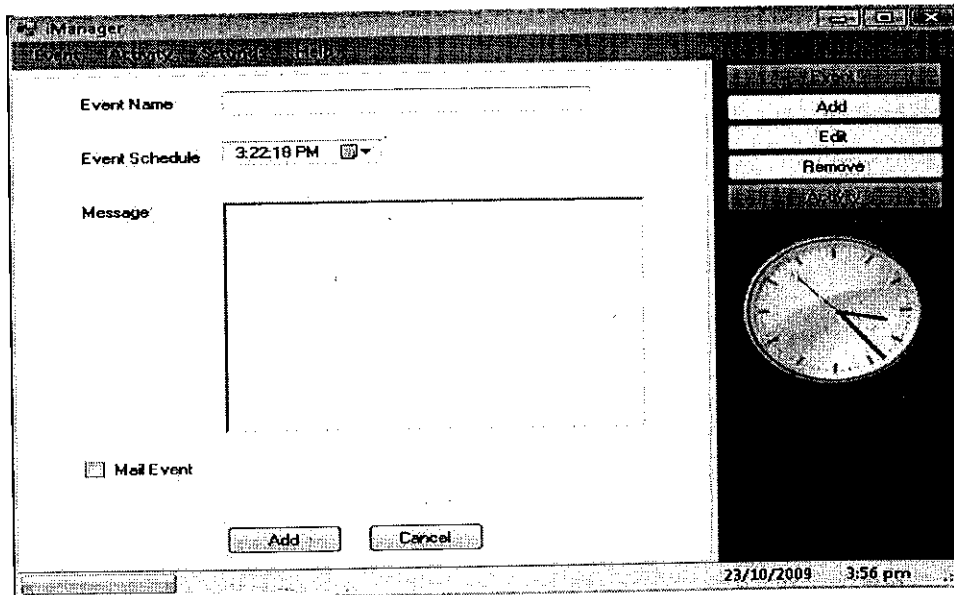
Main User Interface



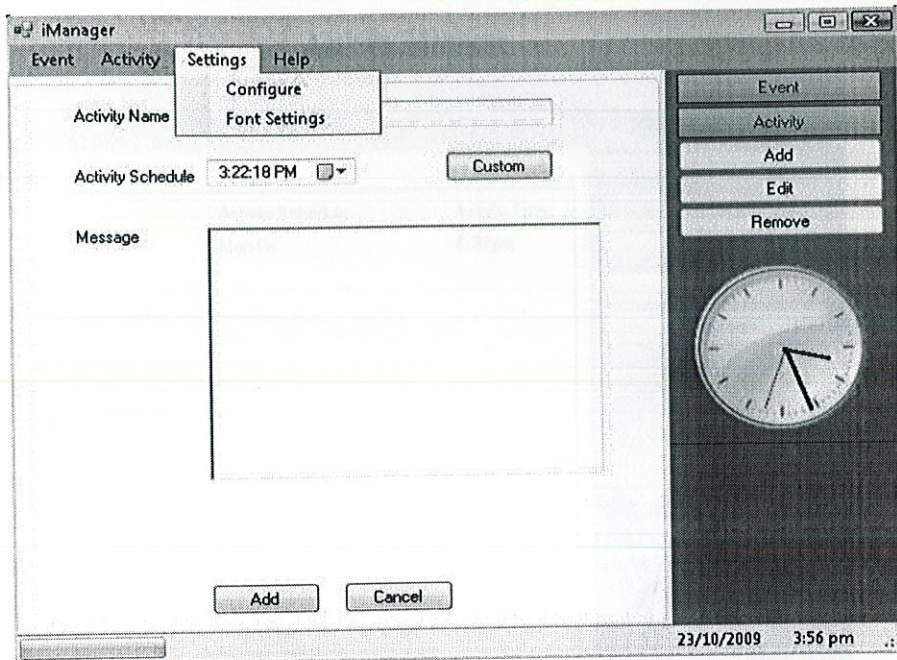
Event Manager



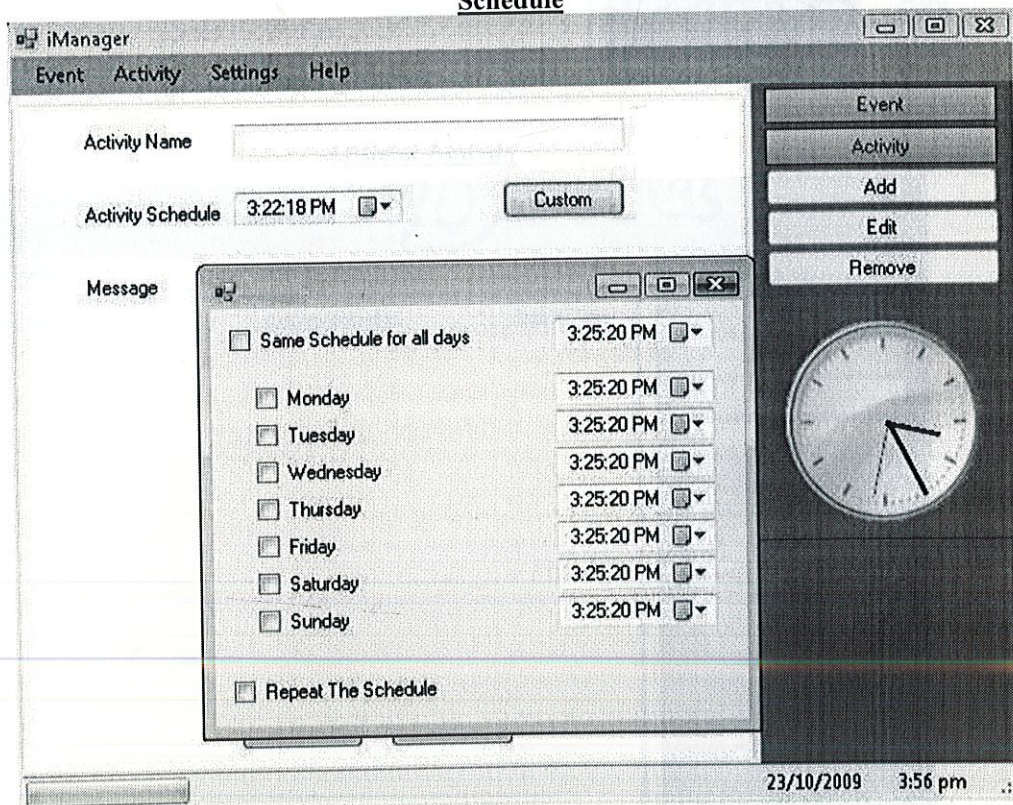
Add a New Event



Customise Settings



**Customise
Schedule**



Activity Manager

Activity Name	Activity Schedule	Activity Time
Squash	Mon-Fri	6:30 pm

23/10/2009 3:56 pm

Add

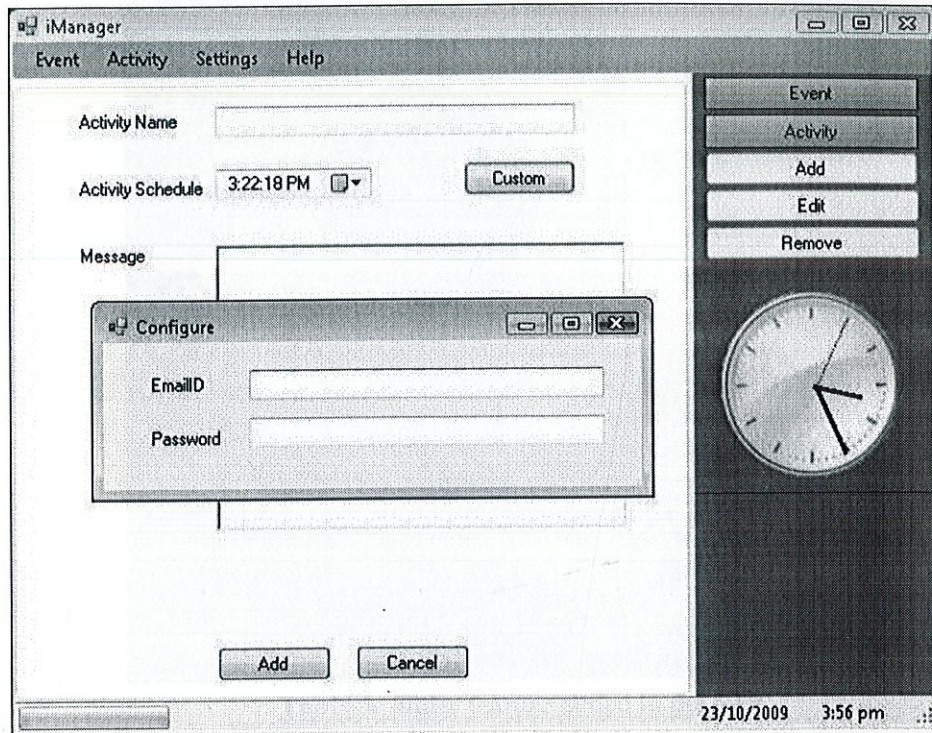
Official Activity

Activity Name	Activity Schedule	Activity Time
---------------	-------------------	---------------

23/10/2009 3:56 pm

33

Configure Settings



7.

ENHANCEMENTS

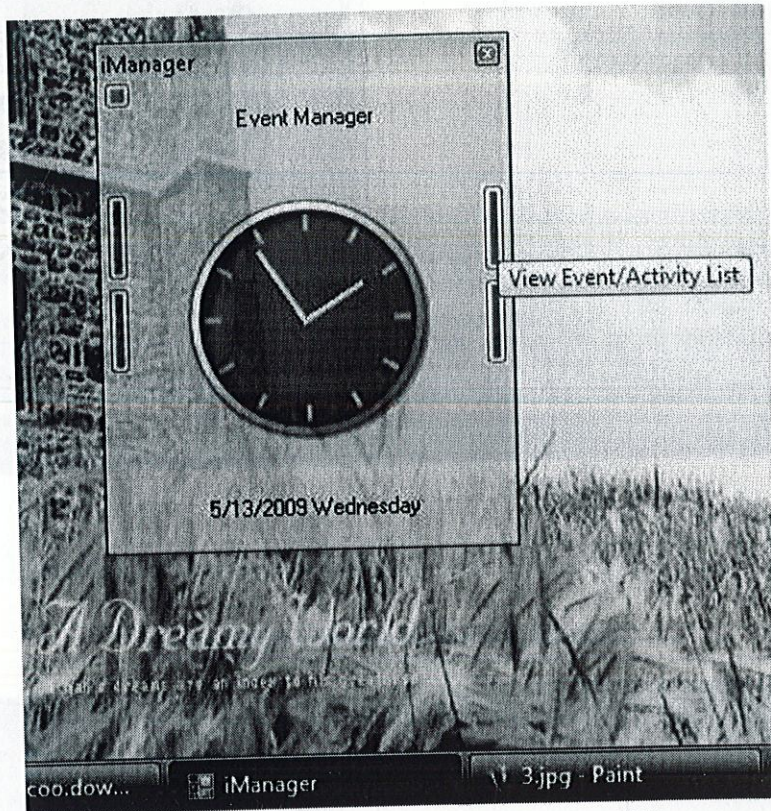
Version 2 :

The new iManager

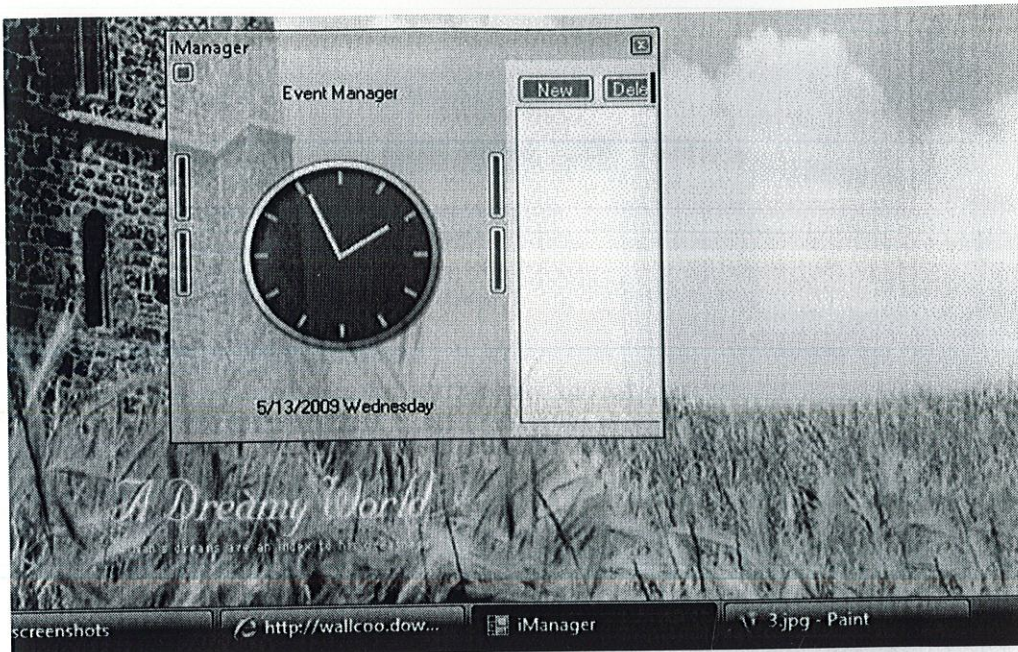


Now the icon has been changed and the iManager icon comes in the status bar.

The new Event manager GUI



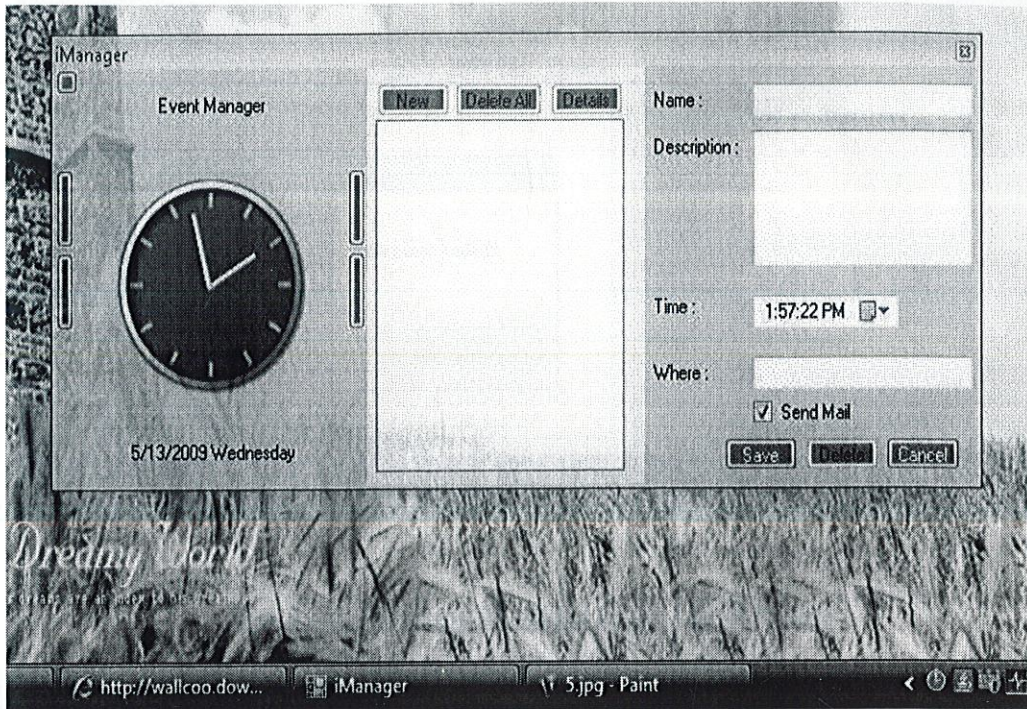
The New Slider feature added in the GUI



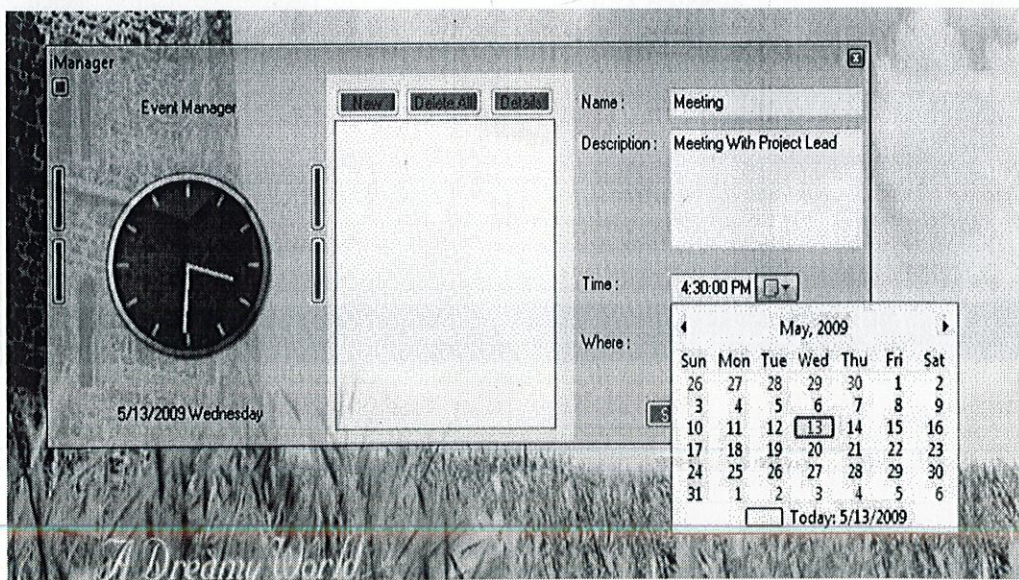
Adding New Event in the Event Manager



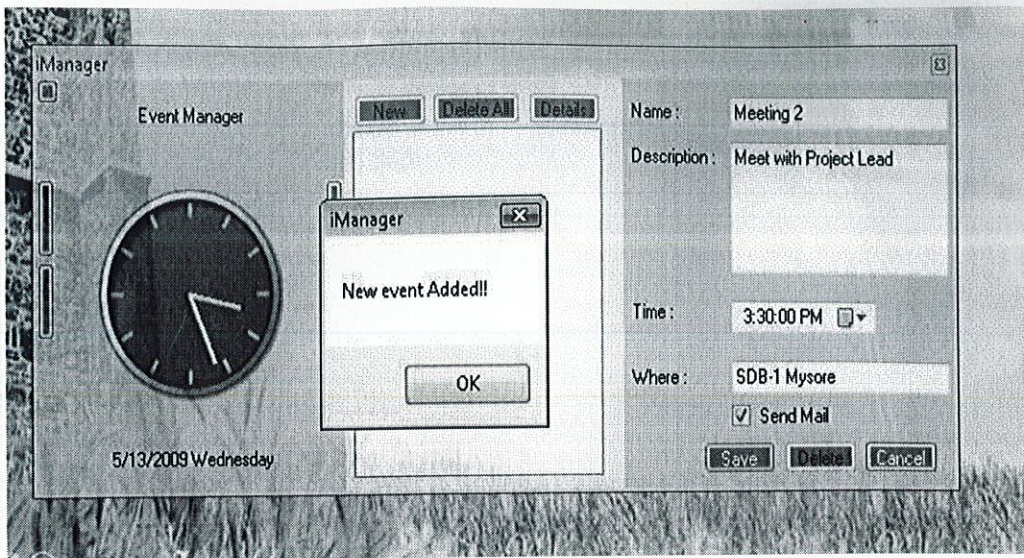
Adding New Event in the Event Manager



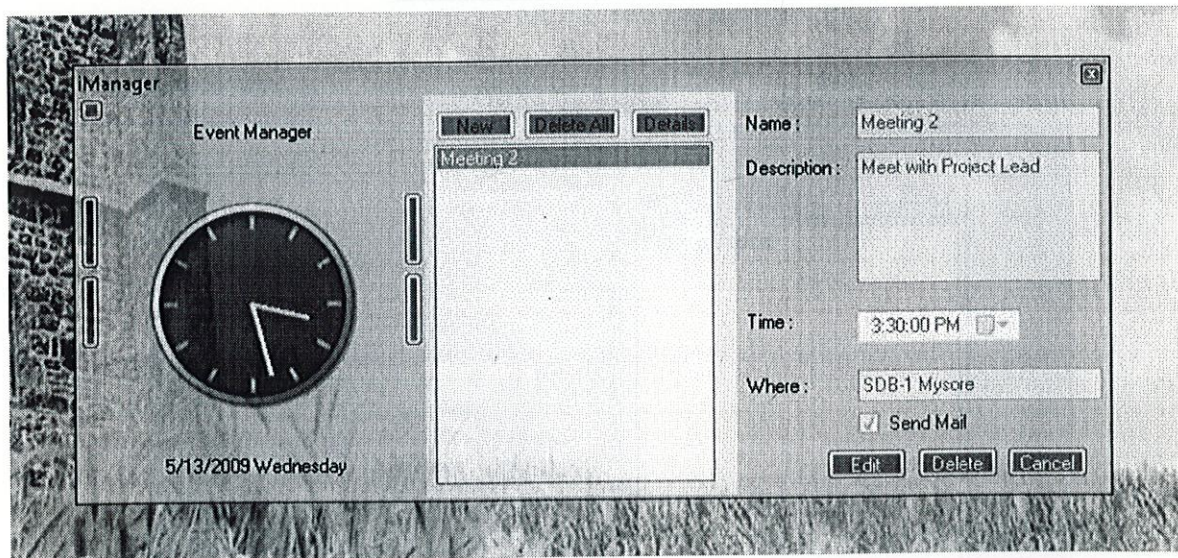
Selecting the Time and Date for a New Event



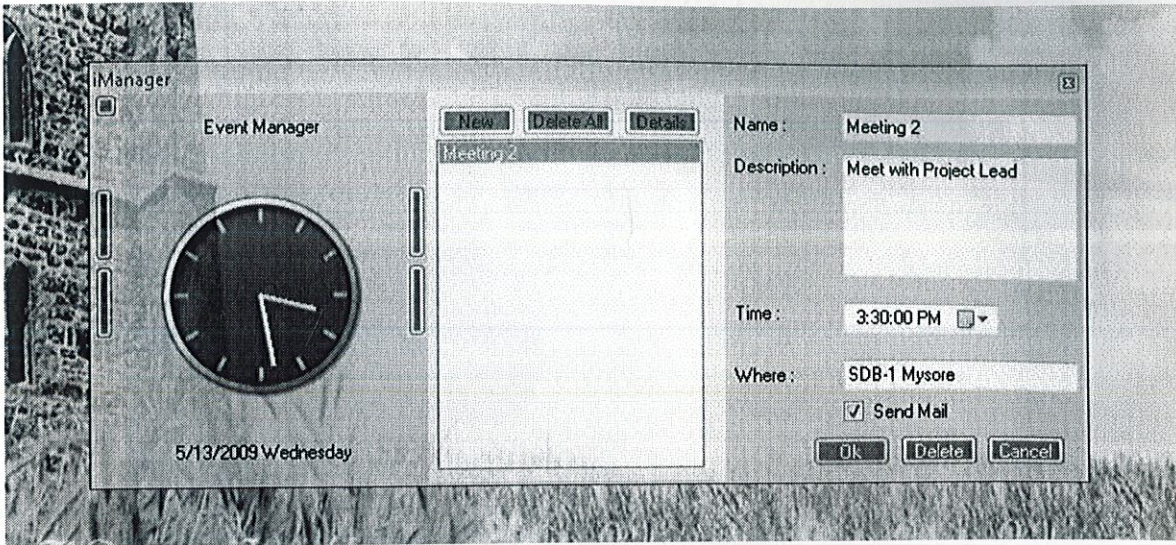
New Event Created



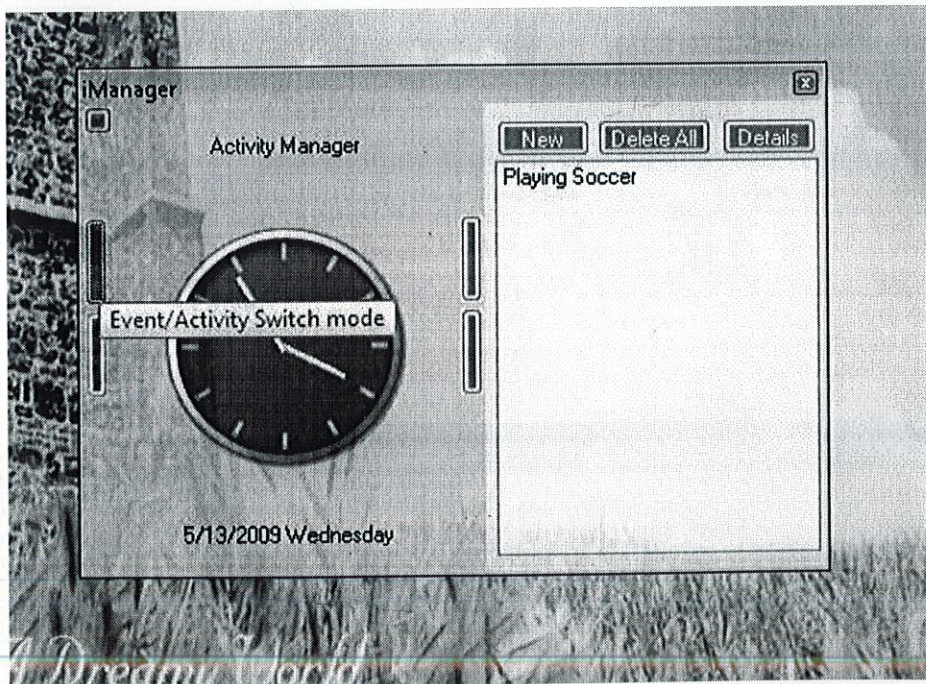
New Event "Meeting 2" Added in the List of Events



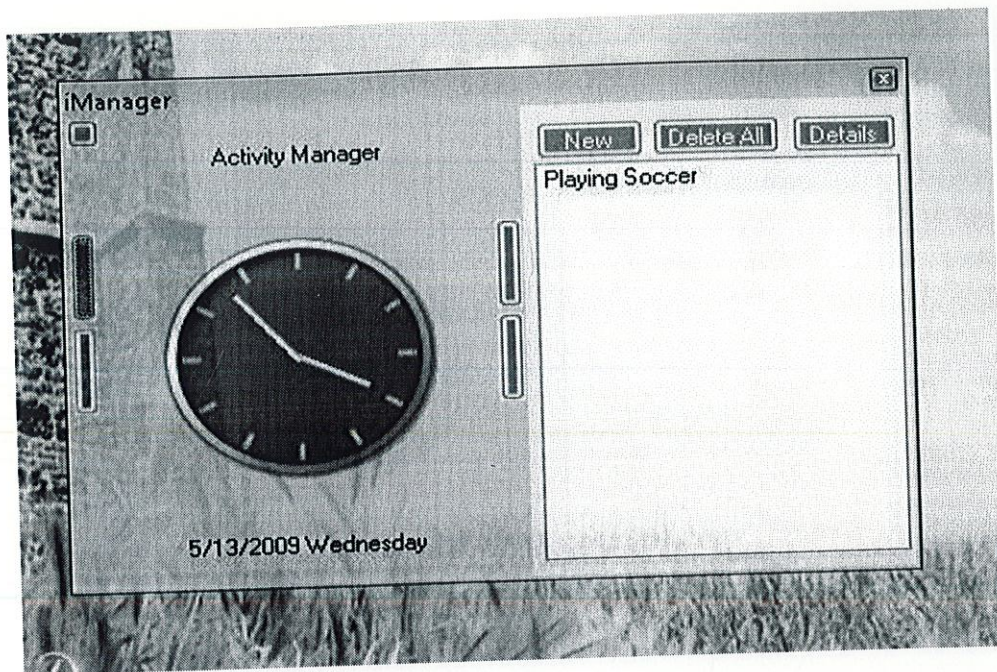
Editing a Created Event



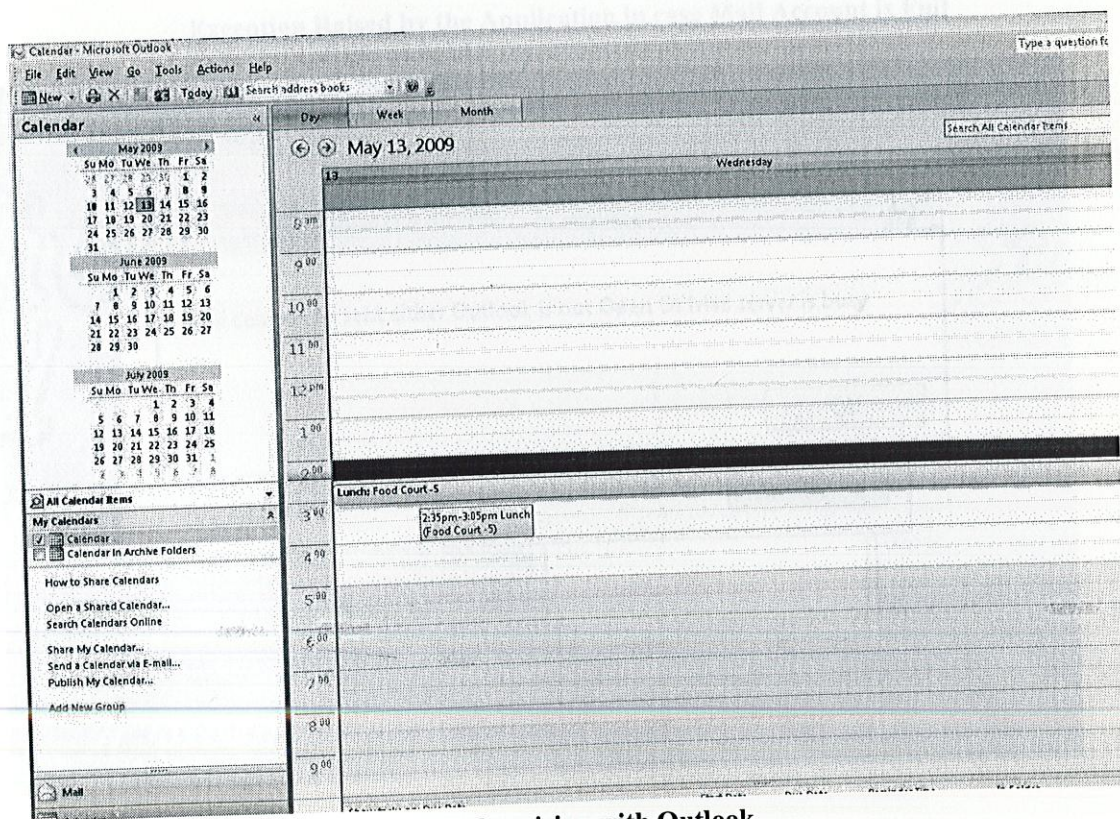
Shifting from Event To Activity Manager



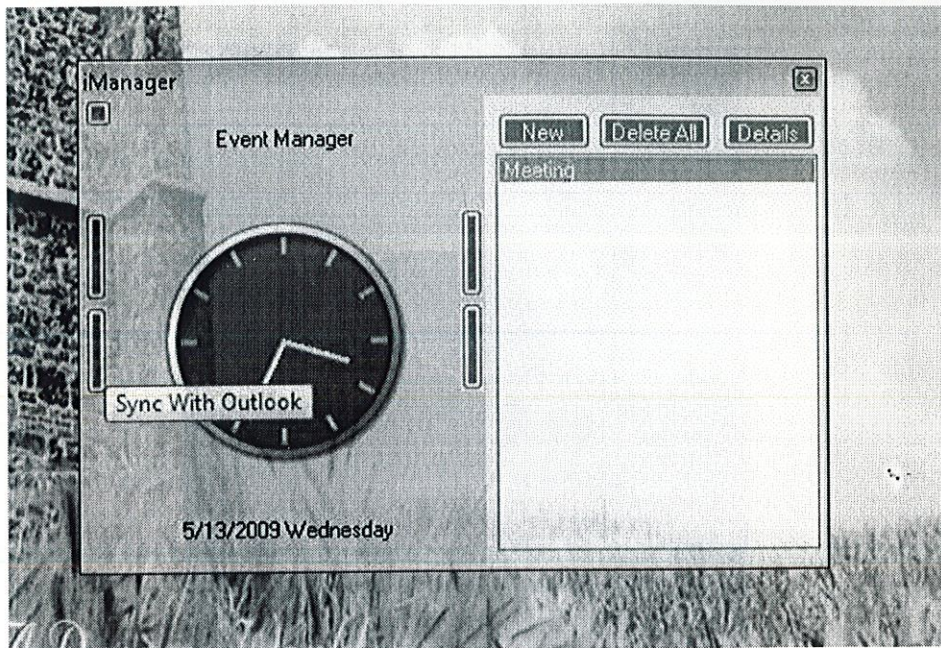
Activity Manager



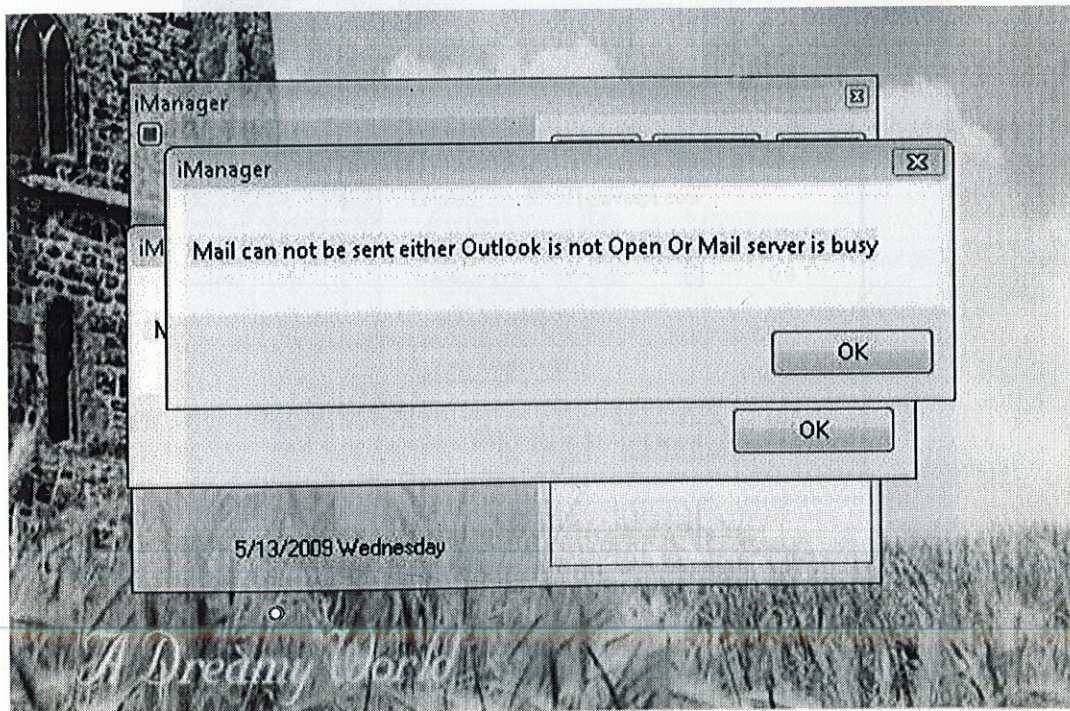
Configuration of Outlook and iManager



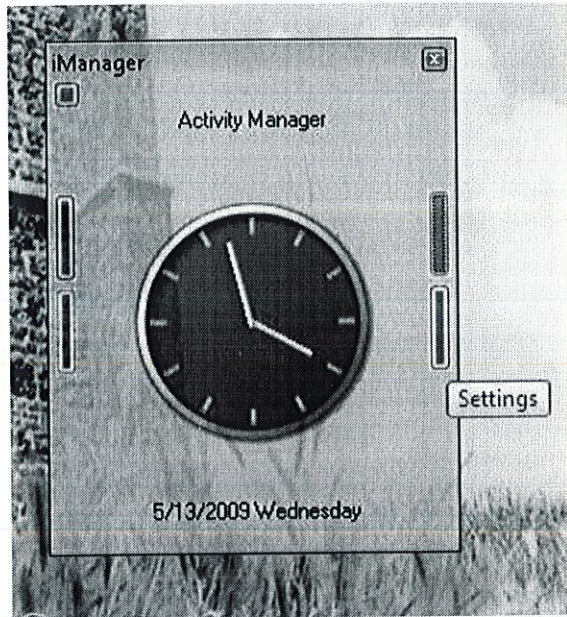
Synchronizing with Outlook



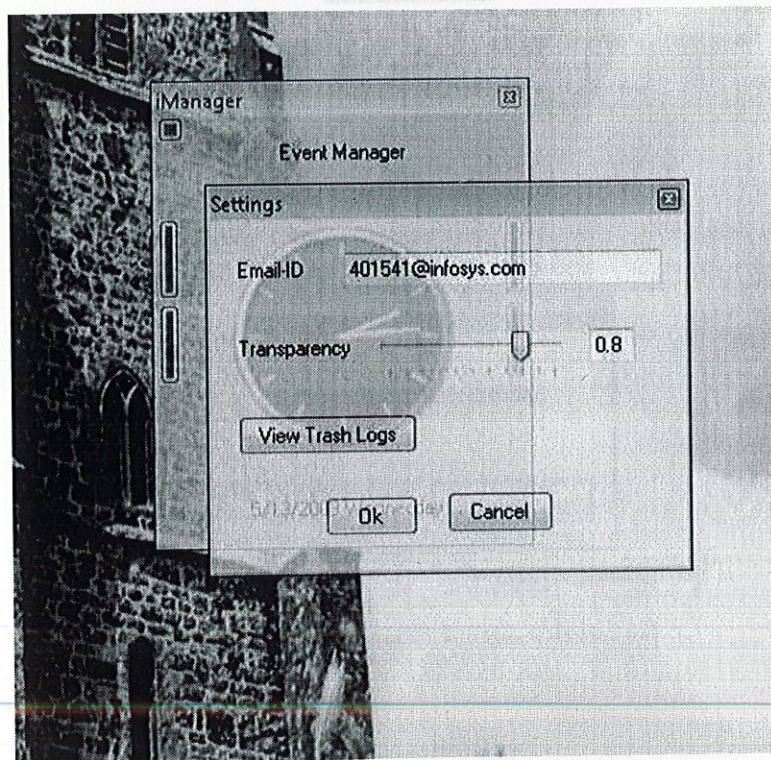
Exception Raised by the Application in case Mail Account is Full



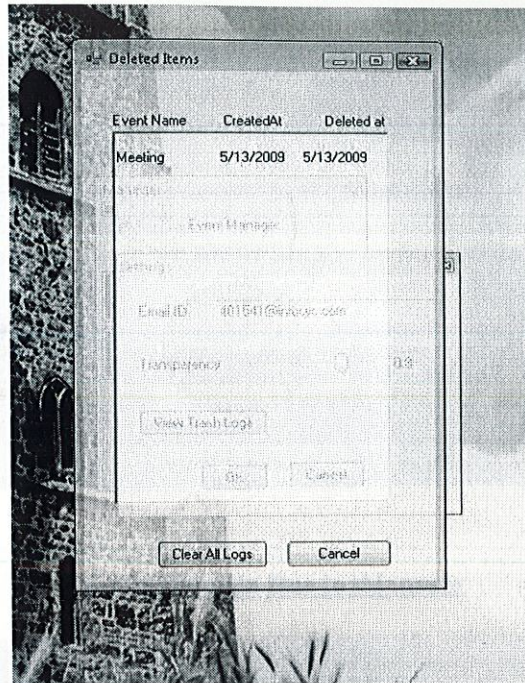
Settings Button



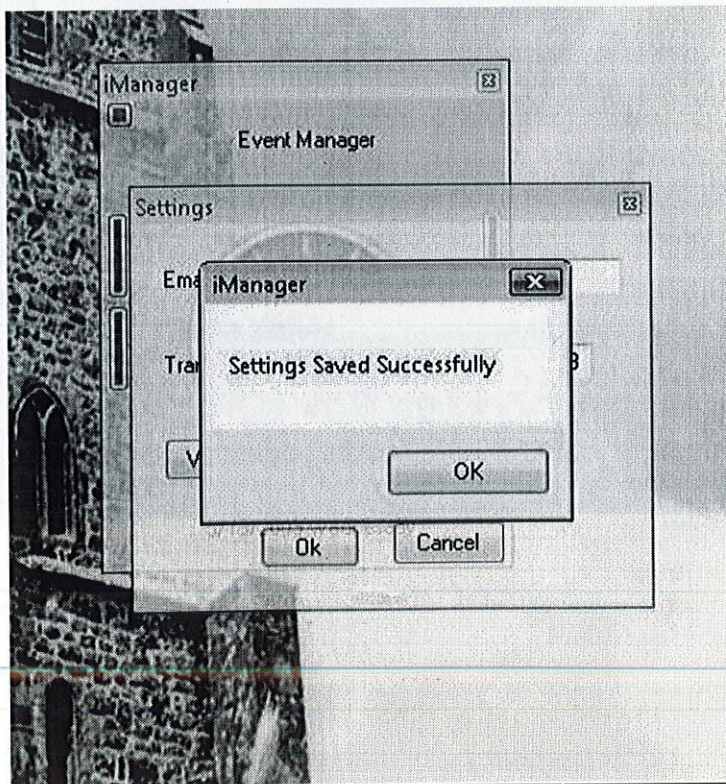
Settings and Transparency Control



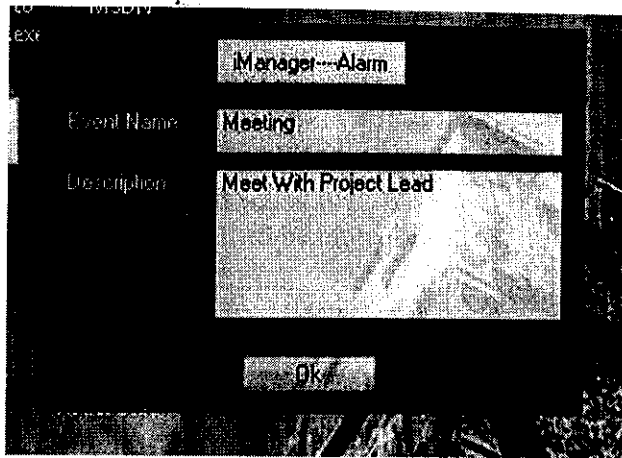
Trash File Consisting of All Deleted Events and Activities



Settings Saved



Alarm Raised by the Application



E-Mail Pop-Up Due to iManager



8. CONCLUSION

The event and activity manager is a modern software which enables any employee in the organisation to get alerts to their daily events and keep a track of activities. The future scope includes having a centralised database on server to keep a track of Employees daily events and activities. The server organised manager will be more robust and easier to manage and more secure as well.

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