Daily Notebook & Social Networking Updater

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Introduction & Objective of the Project:

Nowadays social networking is the main trend among us. We like to share whatever happening with us or around us and follow about others. We want to keep track of every possible thing in our life. Earlier day's people used to maintain Notebook or Daily Diary to write down about their experiences. Now also we do same things but in different ways. With advent of new technologies we use twitter, facebook instead of maintaining a diary. As all of them are online services we can not access them without an internet connection and sometimes it takes lots of time to load or query our own posts from the server.

Daily notebook & Social Networking Updater will provide a way to organize our daily notes and status updates for social networking sites. It will allow users to add notes and update it to most popular social networking sites. User can add notes anytime and mark it for update, and then whenever user comes online the pending updates will be uploaded to the destination sites. Users will be able to download the RSS feed of the websites and the Daily notebook & Social Networking Updater will automatically download the feeds and make it available for offline view also. The overview of this software is displayed below in the diagram.
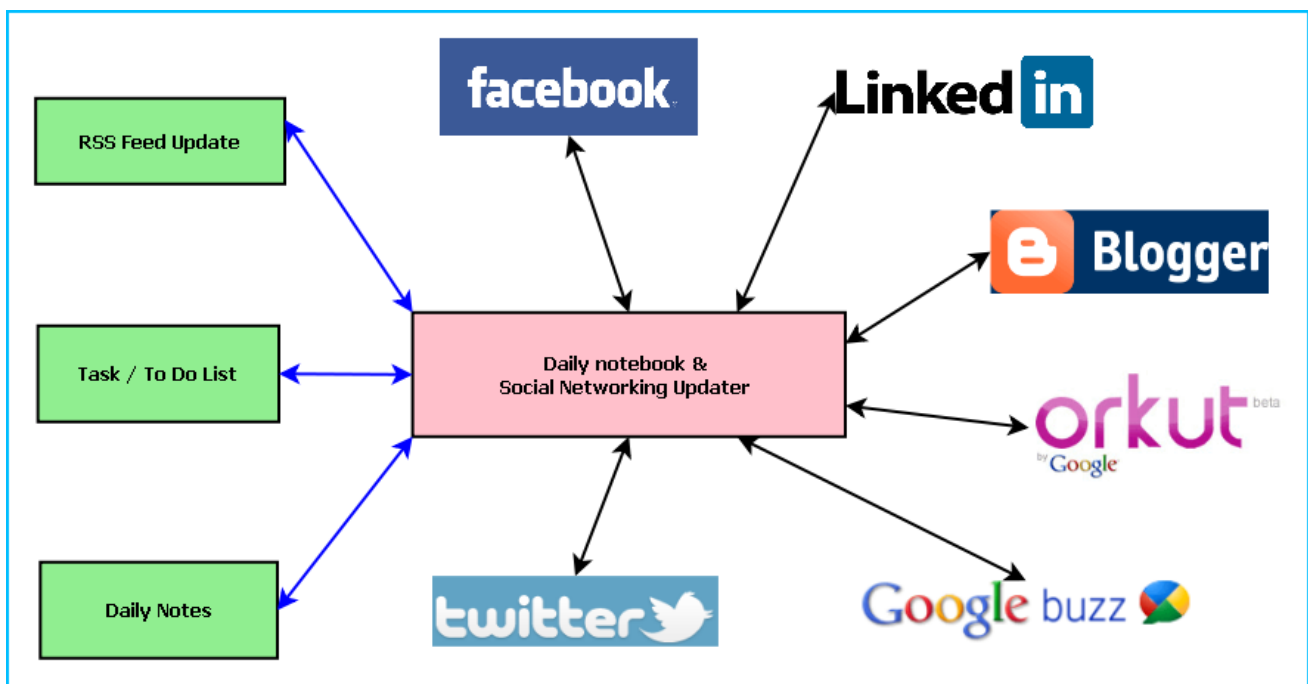

Figure: Overview of Daily notebook & Social Networking Updater

Main features of the Daily notebook & Social Networking Updater are:
- Maintaining daily notes
- Updating the status in Social Networking Sites and downloading the RSS feeds
    - Facebook integration
    - Twitter integration
    - Blogger integration
    - Linkedin integration

- o Google buzz integration
- o Orkut status integration

- Maintaining To Do/Task list
- Reminder/ alarm for scheduled task
- Printing of Notes, To Do & Tasks
- Archiving old data
- Searching Updates

Project Category:

This software will follow Object Oriented Programming Paradigm and use below mentioned areas.

Front End/ GUI Tools: Visual Studio 2010, .NET 4, C#, WPF
Backend: MySQL
Internet Technologies: HTML, JavaScript, PHP, Google App Framework, facebook SDK, twitter SDK, LinkedIn SDK.
Operating Systems: Windows XP, Windows 7
Applications: PC Utility application

Analysis of the Project:

Daily notebook & Social Networking Updater software is divided into three major components. Such as:

- o Daily notebook & Social Networking Updater GUI
- o Daily notebook & Social Networking Updater Engine
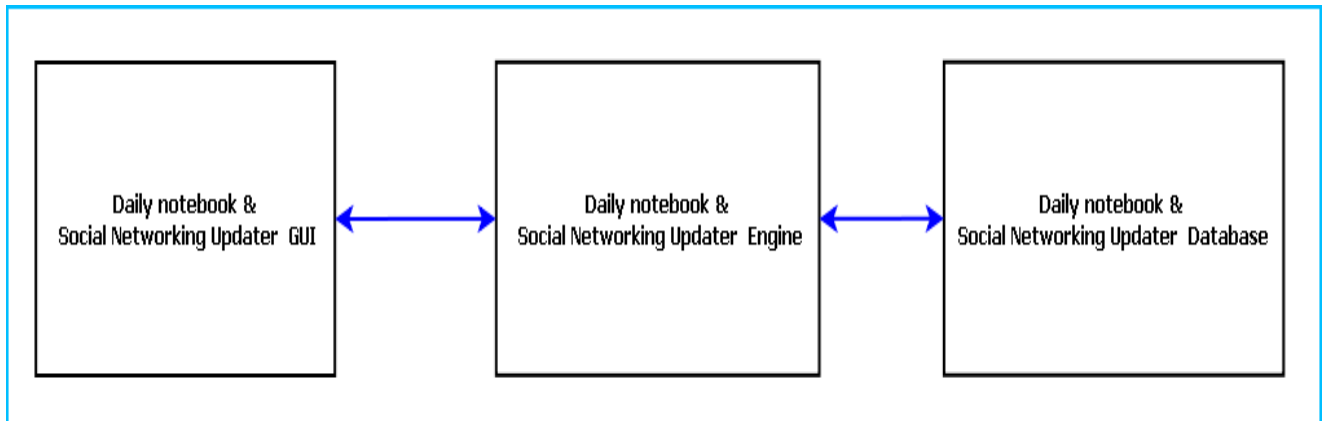- o Daily notebook & Social Networking Updater Database

Figure: Main components of Daily notebook & Social Networking Updater

Daily notebook & Social Networking Updater GUI

Daily notebook & Social Networking Updater will allow user to add daily notes, update them in the social networking sites and view RSS feed updates of their favorite sites. The GUI module is divided into 14 components. Such as:

- o View Manager
- o Daily Note Interface
- o Task / To Do Interface
- o Common Controls
- o Search Interface
- o RSS FEED Interface
- o Archive Interface
- o Facebook Interface
- o Twitter Interface
- o Blogger Interface
- o Linkedin Interface
- o Google buzz Interface
- o Orkut status Interface
- o Engine Interactor

View Manger:

      View Manager controls the interaction between different views. It handles the GUI flow and the look and feel of the application. It manages the components of the GUI. View Manger keeps track of user preferences and displays the data according to it.

      View Manager enables user to choose the view to be displayed and sort the data entries according to name, time etc.

      In this software variable number of views can be displayed. All the views can be arranged as a tabbed/ Split window.

Common Controls:

      Common controls include several controls of the application. Such as: Menu Bar, Toolbar, status bar, Context Menu and progress bar.

Engine Interaction:

This module handles the interaction between GUI and Engine. This module defines all callback for the Engine events.
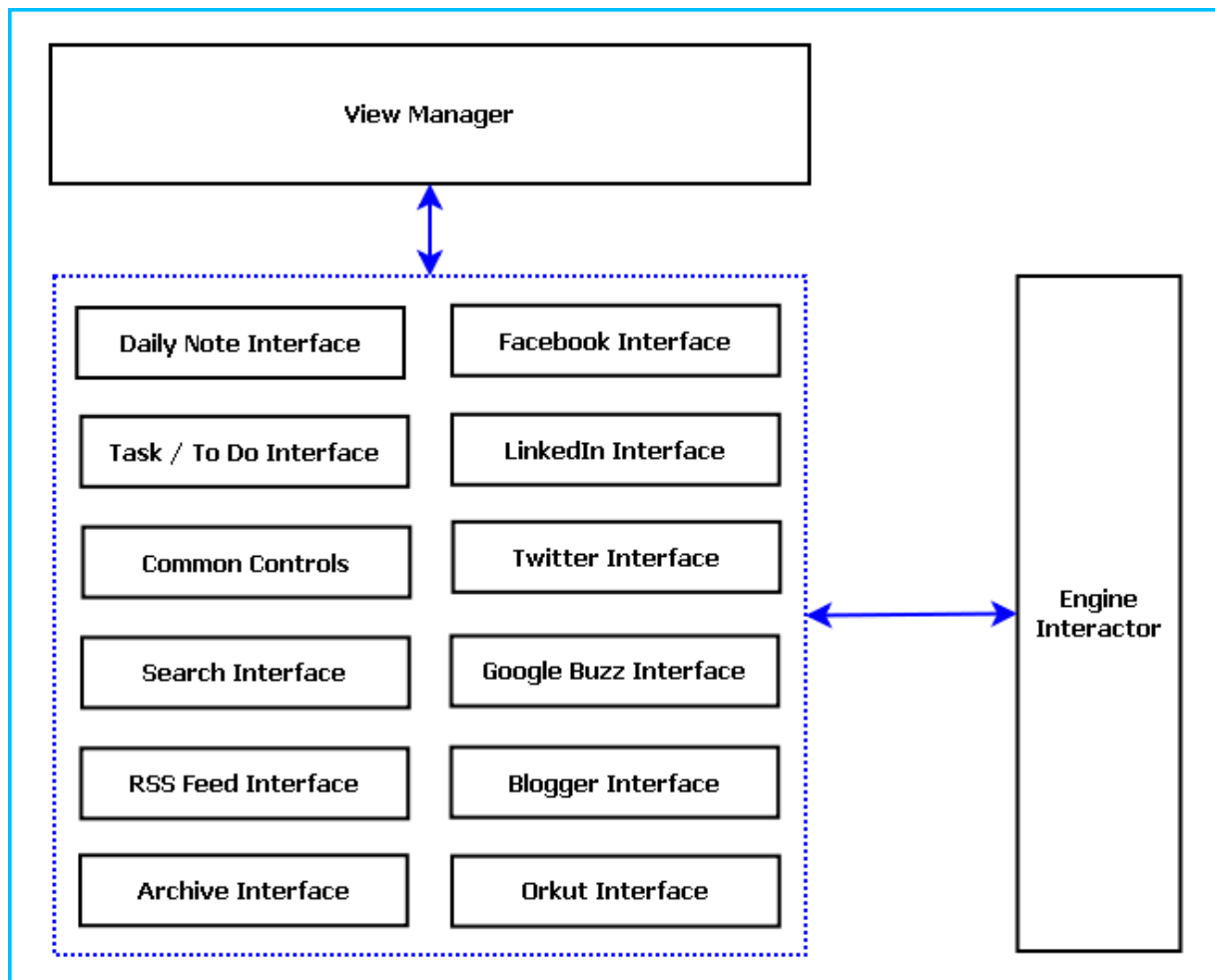

Figure: Different GUI Components

Search Interface

This interface enables user to search any of the updates, notes and RSS feeds from current view port as well as from the archived database. It will have provision for entering search item and selecting the type of search as well as advanced search options.

Facebook Interface

This interface will allow connecting to the facebook site, access login information. It will provide RSS feeds from facebook site. It will display only the text and link of the multimedia contents for time being.

Twitter Interface

This interface will allow connecting to Twitter site and gain the authentication. It will display

user's twitter stream and the other feeds he follows.

Daily Note Interface

This interface will allow user to insert notes and he can choose the services or sites to be updated also. The UI will have a text area where he can enter text and tick the check boxes corresponding to social networking sites to be updated.
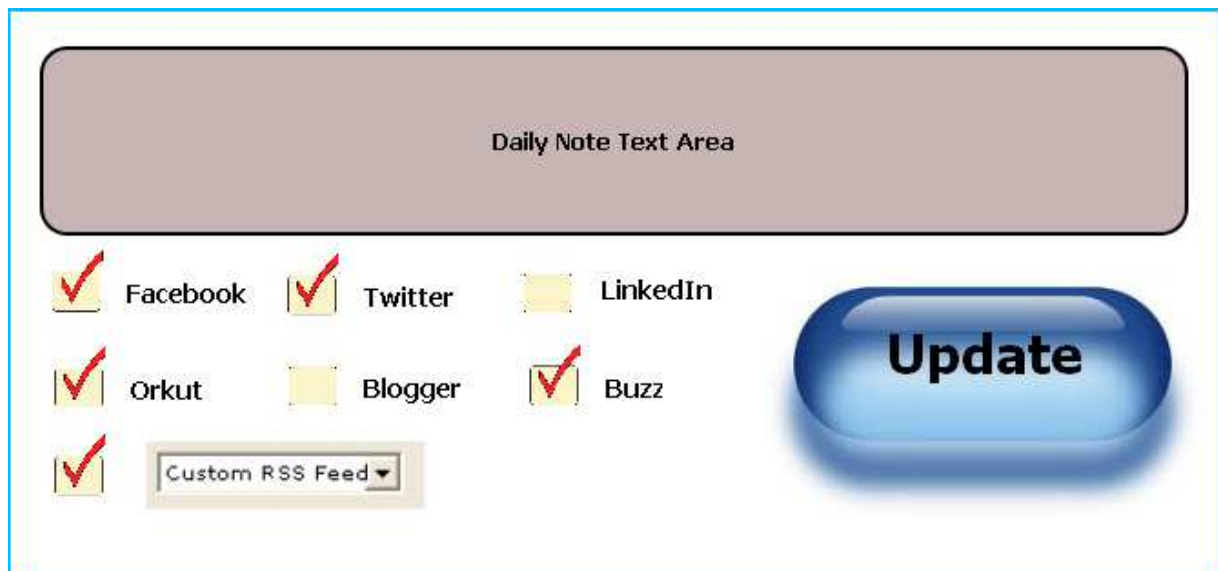

Figure: Daily Note Entry GUI Layout

Blogger Interface

This interface will allow authentication of Blogger access and display Blogger feeds which the user like to follow.

Linkedin Interface

This interface will display the updates from LinkedIn friends, InMails and connection requests. It will allow connecting the LinkedIn site.

Google buzz Interface

This interface will update the Google Buzz notifications from the user's existing friends. It will also have an interface to login using Google Open ID for authentication.

Orkut status Interface

This interface will display Orkut updates, friend's scraps, messages and other notifications. It will allow user to login using Orkut User name and password.

RSS FEED Interface

This will allow user to subscribe with any RSS feed and get regular updates from that feed.

Task / To Do Interface

This interface will allow user to add task list and modify it if required. User can add alarm or notification along with a task.
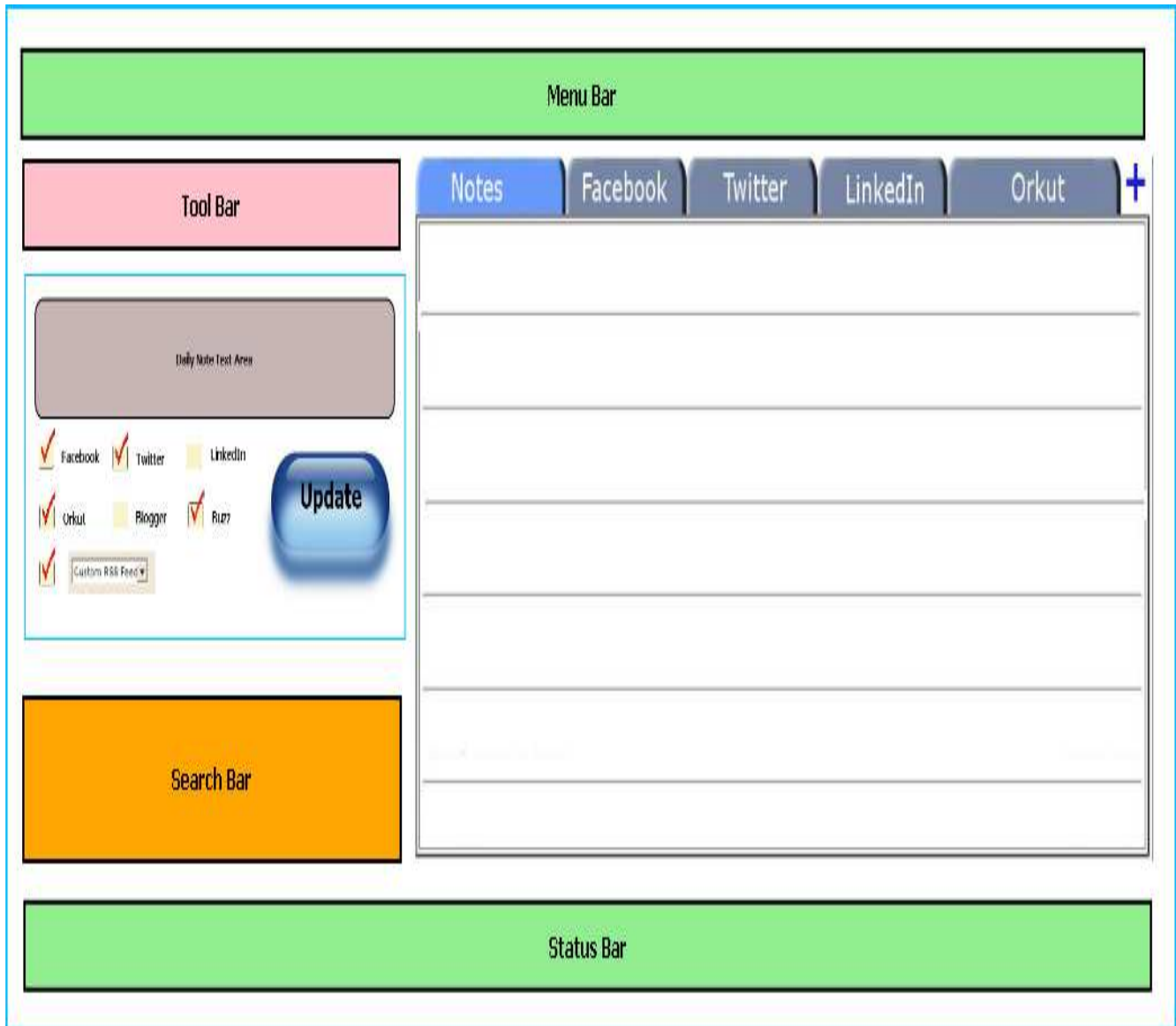
Figure: GUI layout & Placements

Archive Interface

It will allow user to archive old data. User can select data according time, size or service and archive them for saving disk space.

Daily notebook & Social Networking Updater Engine

Daily Notebook & Social Networking Updater Engine controls the logic and mechanism of the application. It processes the GUI requests and interacts with Database and the web feeds. This module is divided into 8 segments. Such as:

- o Daily Note Handler
- o Task / To Do Handler
- o RSS Feed Watcher
- o GUI Interactor
- o Database Manager:
- o Search Engine:
- o Web Service Handler:
- o Data Update Manager

Figure: Engine layers along with interaction with GUI & DB.

Task / To Do Handler:

This module will process the user entered data for Task/ To Do list. It schedules the alarm notification depending on the user preferences.

Daily Note Handler:

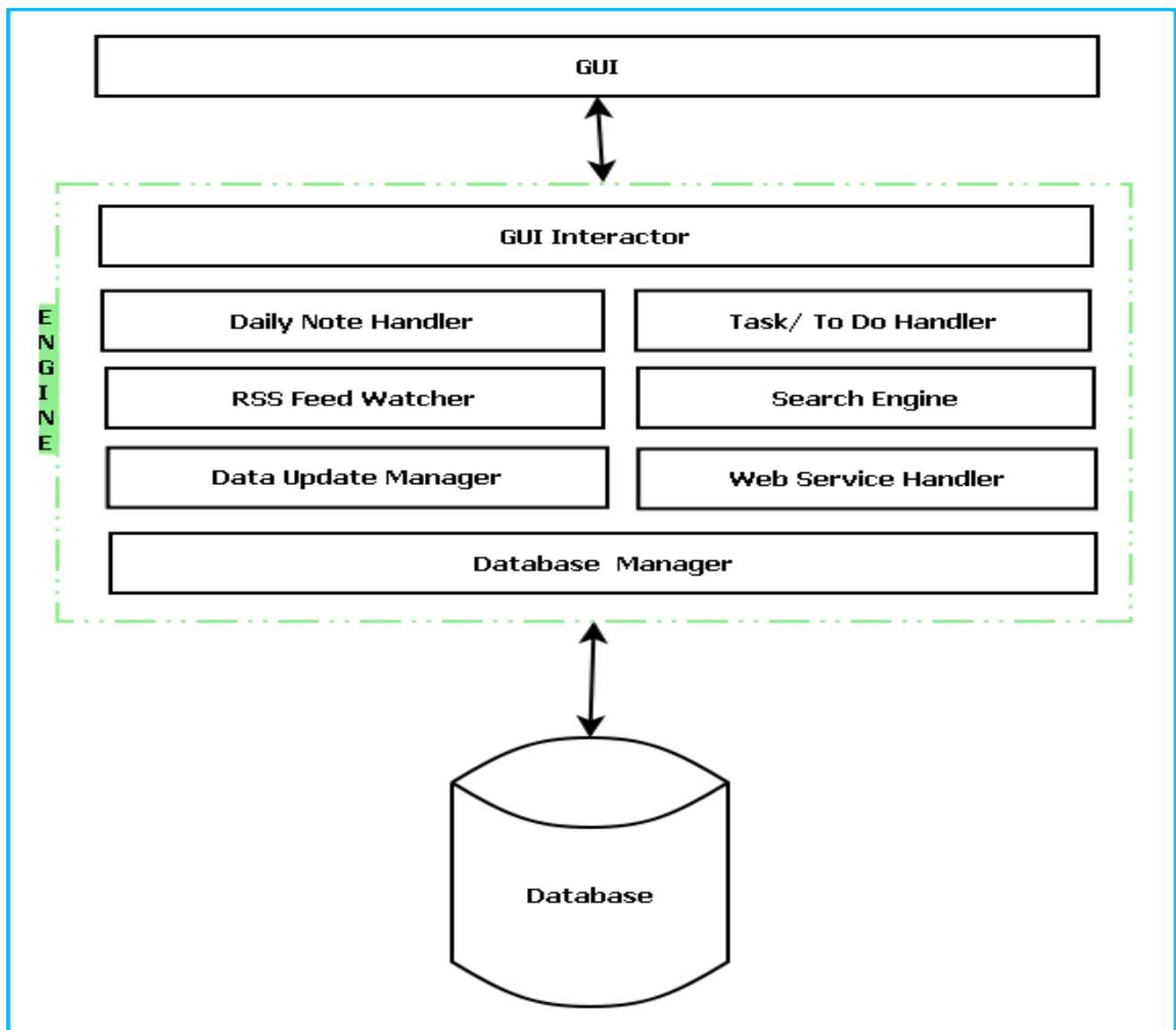Daily Note Handler processes the notes entered by the user. It saves the note in database by passing it to Database Manager. It also saves necessary information like user, time, account and other preferences. Depending on the user input passes the daily note content to the appropriate web service handlers.

RSS Feed Watcher:

This module will poll for RSS feed updates in specific websites. It will download the Feed change and pass it on to the appropriate handler.

GUI Interactor:

This module interacts with GUI module and serves GUI action request. It exposes events to GUI to notify some special actions along with required data.

Database Manager:

This module manages the database. It handles information saving in database, retrieval of information from database.

Search Engine:

Search engine enables rapid and efficient searching of data. Search Engine prepares search indexes depending most accessed data. It improves the efficiency and performance of the software.

Web Service Handler:

Web controller handles the interaction with web services like Facebook, Twitter, Orkut. Web service handler will associate a separate instance for each web service. It keeps track of authentication session, sends data and receives updates.

Data Update Manager:

It controls the incoming data from web service handlers and passes the updates to appropriate web service handler. It is a bridge between Daily Note handler and web service handlers. It validates the data depending on predefined inputs. If validation is failed it generates warning messages.

Daily notebook & Social Networking Updater Database

Daily notebook & Social Networking Updater Database will be an optimized database which will save updates from every web service as well as the notes entered by the user. We will use RDBMS concept.

Hardware & Software required for the application to run

Hardware Requirements

- Computer that has a 1.6GHz or faster processor
- 1 GB (32 Bit) or 2 GB (64 Bit) RAM
- 10 MB of available hard disk space
- DVD-ROM Drive / USB Port

Software Requirements

- Windows XP (x86) with Service Pack 3 / Windows Vista (x86) with Service Pack 2 / Windows 7 (x86)
- Microsoft .NET 4.0

Project Structure:

Project Estimation:

| Task Group	Task	Duration (Man-Days)
GUI	GUI design	75 days
	GUI functionality implementation	
	View Manager	
	Daily Note Interface	
	Task / To Do Interface	
	Search Interface	
	RSS FEED Interface	
	Archive Interface	
	Facebook Interface	
	Twitter Interface	
	Blogger Interface	
	Linkedin Interface	
	Google buzz Interface	
	Orkut Interface	
	Common Controls	
	Engine Interactor	
Engine	Engine Design	45 days
	Daily Note Handler	
	Task / To Do Handler	
	RSS Feed Watcher	
	GUI Interactor	
	Database Manager:	
	Search Engine:	
	Web Service Handler:	
	Data Update Manager	
Database	Database Design	15 days
	Database Implementation	
Integration	Application Integration	15 days
	Creating Installer	
Testing	Unit Testing	15 days
	Integration Testing	
	Regression Testing	
	System Testing	
Documentation	Synopsis	15 days
	Design Document	
	Help Document	

E-R Diagram:

We will design a RDBMS for Daily notebook & Social Networking Updater. The entities and their attributes are listed below. Attributes in Bold letter is the unique key.

Entities	Attributes
Note	**Note Id**, Content, Time, Size, Web Service id, user
RSS Feed	**RSS Feed Id** , Web Service Id, Content, time, size
Daily notebook & Social Networking Updater	**Sw Id**, Web Services Supported, Users, Size
User	**User Id**, Name, Social Network Data, Preferences.
Web Service	**Web Service Id,** Authentication Data, Feed Data, Preferences.

Relationship between Entities:

- ■ Daily notebook & Social Networking Updater has User → 1 : N
- ■ Users post Notes → 1 : N
- ■ Web Service generates Feeds → M : N
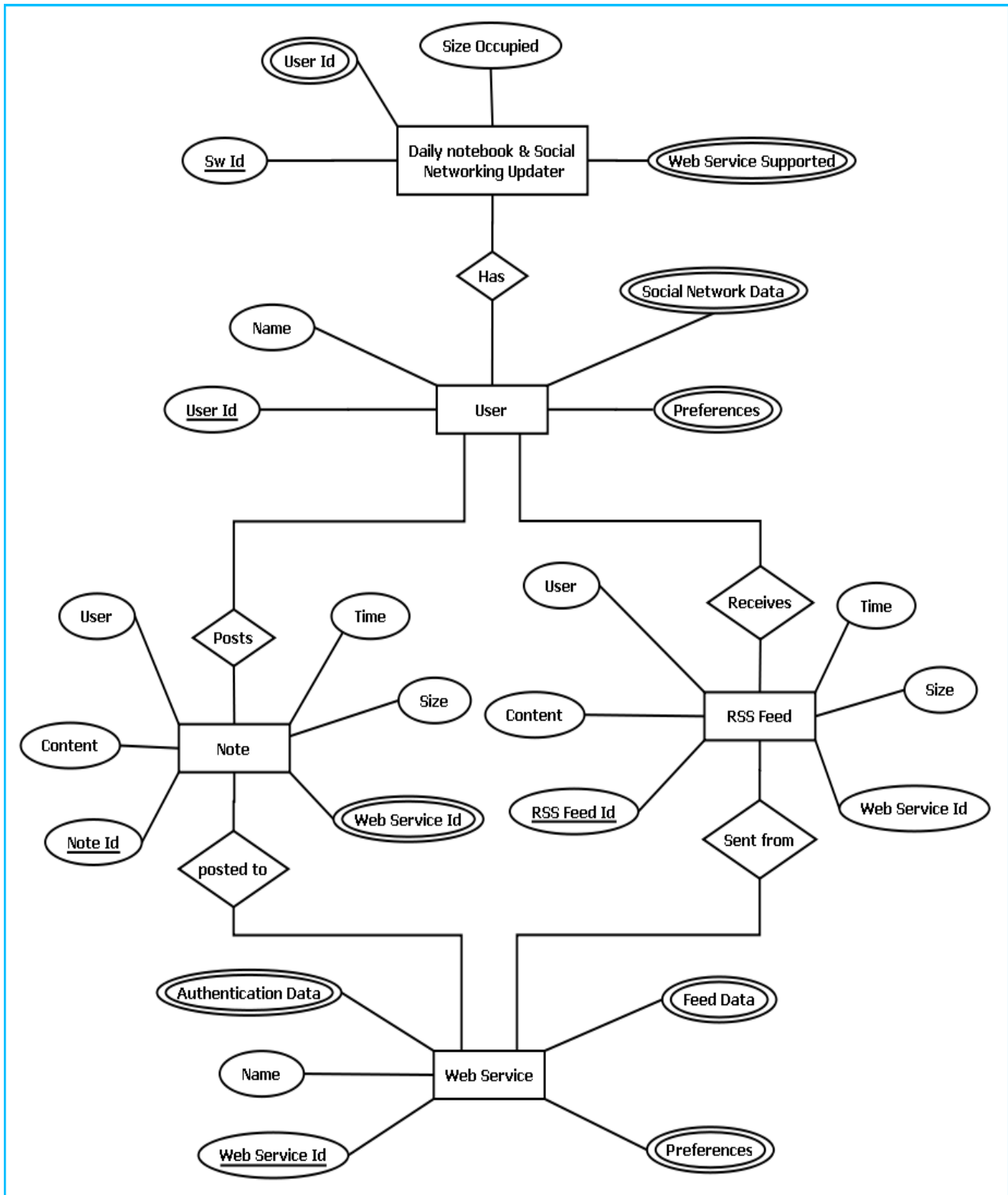
E-R Diagram of Daily notebook & Social Networking Updater

Tools/Platforms used (Hardware/Software):

Hardware:

- Laptop with 2GHZ processor
- 2 GB RAM
- 320 GB hard disk (NTFS File System)
- 8 GB USB Pen Drive (FAT File System)

Software:

- Windows XP (x86) with Service Pack 3 / Windows Vista (x86) with Service Pack 2 / Windows 7 (x86)
- Microsoft .NET 4.0
- Windows Presentation Framework(WPF)
- Windows Communication Framework(WCF)
- Visual Studio 2010 Express Edition (IDE)
- MySQL database
- Dia for Diagram Drawing & Modeling.
- Google App Framework
- Facebook Php Sdk & FBML
- Twitter Sdk
- LinkedIn Sdk
- RSS Feed Burner Sdk

Any Client/Industry:

E-Komfort Zone
Bamangachi Station Road,
P.O: Bamangachi, P.S: Barasat,
Dist: North 24 Pgs
West Bengal- 743706

Future Scope and Further enhancement of the project:

- Now it will display the text based RSS feeds and link of the multimedia contents. We will display the Multimedia contents like Video, Audio & Image in future.
- To support UNIX / Linux Based Operating systems.
- To Support Mobile Operating systems for Symbian, Meego & Android.

---------------------------- Thank You------------------------