Chapter 1

Introduction

1.1 Overview

A person browsing internet finds difficulty in managing the right amount of time to be spent browsing a webpage. The idea is to develop an application that will keep track of browsing time. The alarm clock efficiently manages the browsing time of the user by keeping track of how much time exactly the user has to spend on browsing the webpage. Alarm clock is used to set the time as a reminder. Once the set time occurs, the alarm either beeps or a pop up message will be displayed. If the user has to jot down an important point or some links, then clipboard can be used. It allows a user to save multiple links. Instances may arise when a user needs to perform brief calculations and conversions while browsing session then he/she can make use of calculator and currency convertor tabs. Thereby it will be a personalized Graphical User Interface.**[1]**

1.2 Problem Statement

To benefit the digital natives by giving them an organized browsing experience by making use of the concept of timers and also keeping handy basic utilities for the user such as calculator, alarm clock and clipboard.

1.3 Introduction to Graphical User Interface

A graphical user interface (GUI) is a human-computer interface (i.e., a way for humans to interact with computers) that uses windows, icons and menus and which can be manipulated by a mouse (and often to a limited extent by a keyboard as well).

GUIs stand in sharp contrast to command line interfaces (CLIs), which use only text and are accessed solely by a keyboard. The most familiar example of a CLI to many people is MS-DOS. Another example is Linux when it is used in console mode (i.e., the entire screen shows text only).

A window is a (usually) rectangular portion of the monitor screen that can display its contents (e.g., a program, icons, a text file or an image) seemingly independently of the rest of the display screen. A major feature is the ability for multiple windows to be open simultaneously. Each window can display a different application, or each can display different files (e.g., text, image or spreadsheet files) that have been opened or created with a single application.

An icon is a small picture or symbol in a GUI that represents a program (or command), a file, a directory or a device (such as a hard disk or floppy). Icons are used both on the desktop and within application programs. Examples include small rectangles (to represent files), file folders (to represent directories), a trash can (to indicate a place to dispose of unwanted files and directories) and buttons on web browsers (for navigating to previous pages, for reloading the current page, etc.)

From the work done so far, we come across various advantages of GUI.

- A major advantage of GUIs is that they make computer operation more intuitive, and thus easier to learn and use. For example, it is much easier for a new user to move a file from one directory to another by dragging its icon with the mouse than by having to remember and type seemingly arcane commands to accomplish the same task.
- Adding to this intuitiveness of operation is the fact that GUIs generally provide users with immediate, visual feedback about the effect of each action. For example, when a user deletes an icon representing a file, the icon immediately disappears, confirming that the file has been deleted (or at least sent to the trash can). These contrasts with the situation for a CLI, in which the user types a delete

command (inclusive of the name of the file to be deleted) but receives no automatic feedback indicating that the file has actually been removed.

- In addition, GUIs allow users to take full advantage of the powerful multitasking (the ability for multiple programs and/or multiple instances of single programs to run simultaneously) capabilities of modern operating systems by allowing such multiple programs and/or instances to be displayed simultaneously. The result is a large increase in the flexibility of computer use and a consequent rise in user productivity.

1.4 Clock

An alarm clock is a clock with a built in alarm designed to wake a person up at a specific time. Alarm clocks serve as reminders to rouse people from their night's sleep or a short nap. Depending on the clock's design, the alarm goes off with sound, light, sensors, or buzzers to alert the person of the signal.

The clock is made to work like an alarm clock. It'll help the user to work efficiently and effectively.

1.5 Clipboard

The clipboard is a special location in your computer's memory that temporarily stores data that has been cut or copied from a document. This data can then be pasted to a new location. The clipboard will typically hold its information until you cut or copy something else, or log out of the computer. For example, a user may copy information from a word processor and paste that information into an e-mail message.

The clipboard designed by us allows the user to save multiple links/ information without erasing the previously entered data. It depends on the user either to keep or delete the links at any time.

1.6 Calculator

A calculator is a device that performs arithmetic operations on numbers. The simplest calculators can do only addition, subtraction, multiplication, and division.

The calculator developed by us also does basic arithmetic operation but it is available in handy. The User need not go to start menu and open the calculator, it is available along with other two utilities mentioned above.

1.7 Currency Convertor

A currency converter is software code that is designed to convert one currency into another in order to check its corresponding value. The code is generally a part of a web site or it forms a mobile app and it is based on current market or bank exchange rates.

Here we have developed a currency convertor which is dynamic in nature. As and when the values of the currency changes, it shall be reflected in the convertor. It has been linked with a website which updates the value of the currency and hence an internet connectivity is a must in this case.

1.8 Motivation for work

For being a digital native, doing tasks sitting in front of desktop/ laptop is essence nowadays. We are completely dependent on technologies. We often tend to spend more time browsing internet or doing other tasks.

The problems which we face are: -

i. Wastage of time.
ii. Improper schedule.
iii. Lose track of time.

By the help of this project we aim at benefitting the digital natives by giving them an organized browsing experience as well as a schedule by the help of alarm clock and other useful personalized GUI utilities.
It will therefore help the user to efficiently manage the time by properly scheduling it and while working alarm clock can be used.

1.9 Problems with Existing System

- Alarm Clock- Wakes up the PC as soon as it goes to sleep mode.
- Clipboard- The available clipboard allows saving of only one link at a time.
- Calculator- The calculator is not present in handy i.e. needs to open by going to start menu.
- Currency Convertor- The currency convertor available is static in nature that is the currency values are not updated with time.

1.10 Proposed work

Our objective is to develop a GUI that is able to perform various works which meets the requirement of user.

The Proposed system works in following manner.

- Alarm clock will buzz or will appear in the screen as a pop up message telling the task to be done. It will act as a reminder.
- Clipboard will be used to save multiple links and other necessary information while working in the internet.
- Calculator can be used to perform some basic calculation.