

1. **Binary to Decimal and Back Converter** - Develop a converter to convert a decimal number to binary or a binary number to its decimal equivalent.
2. **Calculator** - A simple calculator to do basic operators. Make it a scientific calculator for added complexity.
3. **Unit Converter** (temp, currency, volume, mass and more) - Converts various units between one another. The user enters the type of unit being entered, the type of unit they want to convert to and then the value. The program will then make the conversion.
4. **Alarm Clock** - A simple clock where it plays a sound after X number of minutes/seconds or at a particular time.
5. **Graph from links** - Create a program that will create a graph or network from a series of links.
6. **Eulerian Path** - Create a program which will take as an input a graph and output either a Eulerian path or a Eulerian cycle, or state that it is not possible. A Eulerian Path starts at one node and traverses every edge of a graph through every node and finishes at another node. A Eulerian cycle is a eulerian Path that starts and finishes at the same node.
7. **Check if Palindrome** - Checks if the string entered by the user is a palindrome. That is that it reads the same forwards as backwards like "racecar"
8. **Count Words in a String** - Counts the number of individual words in a string. For added complexity read these strings in from a text file and generate a summary.
9. **Regex Query Tool** - A tool that allows the user to enter a text string and then in a separate control enter a regex pattern. It will run the regular expression against the source text and return any matches or flag errors in the regular expression.
10. **Patient / Doctor Scheduler** - Create a patient class and a doctor class. Have a doctor that can handle multiple patients and setup a scheduling program where a doctor can only handle 16 patients during an 8 hr work day.

11. **Recipe Creator and Manager** - Create a recipe class with ingredients and a put them in a recipe manager program that organizes them into categories like deserts, main courses or by ingredients like chicken, beef, soups, pies etc.
12. **Get Atomic Time from Internet Clock** - This program will get the true atomic time from an atomic time clock on the Internet. Use any one of the atomic clocks returned by a simple Google search.
13. **Fetch Current Weather** - Get the current weather for a given zip/postal code. Optional: Try locating the user automatically.
14. **Report Generator** - Create a utility that generates a report based on some tables in a database. Generates a sales reports based on the order/order details tables or sums up the days current database activity.
15. **Event Scheduler and Calendar** - Make an application which allows the user to enter a date and time of an event, event notes and then schedule those events on a calendar. The user can then browse the calendar or search the calendar for specific events. Optional: Allow the application to create re-occurrence events that reoccur every day, week, month, year etc.
16. **Budget Tracker** - Write an application that keeps track of a household's budget. The user can add expenses, income, and recurring costs to find out how much they are saving or losing over a period of time. Optional: Allow the user to specify a date range and see the net flow of money in and out of the house budget for that time period.
17. **TV Show Tracker** - Got a favorite show you don't want to miss? Don't have a PVR or want to be able to find the show to then PVR it later? Make an application which can search various online TV Guide sites, locate the shows/times/channels and add them to a database application. The database/website then can send you email reminders that a show is about to start and which channel it will be on.