

Due Date: October 19, 2005

Objectives: Bourne Shell scripts, UNIX utilities and commands.

Create a program “**phonelist**” using ONLY a Bourne shell script and utilities covered in this class (*not* C, BASIC, Java, Perl, yacc, etc). This program will maintain a database of names, addresses, and phone numbers in a text file (\$HOME/tel). The entire program must be contained in a single script file.

The text file database will be formatted as follows:

Name|Address|Phone|Date

Where “Name” can be any free format text entered by the user with as many sub-sections as needed (First Name, Last Name, Middle, Title, etc).

Address will consist of multiple lines of arbitrary length and number. Each line will be separated by the “~” character.

Phone is also a free format text field.

Date is automatically inserted for the time the entry was made in the format: “Month-name Day Year Hour:Minutes:Seconds”

Example database file:

```
Bob Q. Edwards|500 Smith St.~Harvest AL 35749|none|Sep 09 2005 16:43:23
Jan Smith|987 Commerce Blvd.~Huntsville AL 35806|721-1111| Sep 09 2005 17:22:56
Joe Bob Jones| |011-22-333-4-555| Sep 09 2005 16:32:01
John Smith|123 First St.~Building 6263~Redstone Arsenal AL~35806|313-1234| Sep 08 2005 23:55:23
```

If the command “phonelist” is executed without arguments, the program will prompt for Name, Address, and Phone to add to the database. Example:

```
$ phonelist
Name: Jane Smith
Address: 123 Anywhere St
Address: Huntsville, AL 35806
Address:
Phone: 256-535-5555 ext 123
```

This entry will be appended to the database:

```
Jane Smith|123 Anywhere St~Huntsville, AL~35806|256-535-5555 ext 123| Sep 10 2005 23:55:23
```

If the command “phonelist Smith” is executed, the program will display all entries that have Smith in the name (but not address or phone number or date). Example:

```
$ phonelist Smith
```

```
John Smith  
123 First St.  
Building 6263  
Redstone Arsenal AL  
35806  
313-1234
```

```
Jane Smith  
123 Anywhere St  
Huntsville, AL 35806  
256-535-5555 ext 123
```

The program must also handle quoted strings:

```
$ phonelist “John Smith”
```

```
John Smith  
123 First St.  
Building 6263  
Redstone Arsenal AL  
35806  
313-1234
```

Remember to document your program appropriately, and test it with multiple cases.

Submit files **\$HOME/tel**, and **phonelist** to your instructor both electronically and on paper.