Bison Quick Tutorial for Debian and Debian-based Operating Systems – [GNU/Linux] –

(Last Updated: 11/10/2010)

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0). Requirements:

1. The GCC compiler.
2. Bison Gnome Parser.
3. An up-to-date Debian or Debian-based operating system.
   (e.g. Debian, Ubuntu, Linux Mint, CrunchBang Linux...etc)

1). Download the Requirements:

Step 1: Open your Terminal (e.g. Gnome Terminal).
Step 2: ***sudo apt-get update***
Step 3: ***sudo apt-get install bison***
Step 4: ***sudo apt-get install gcc***

2). Testing the Tools and Reading the Help Pages:

*Testing the Bison version: ***bison --version***
*Testing the GCC version: ***gcc –version***

*For Bison: ***bison --help***
*For GCC: ***gcc --help***

3). Testing using an Example:

Step 1: Download the **calc3.rar** archive from the site of the course.

Step 2: Use the ***pwd*** command – (for displaying your current location) and the ***cd*** command – (to navigate down the root till you reach the specified directory of calc3).

Step 3: ***ls -all*** – (to view all the files listed in the calc3 archive after extracting it).

Step 4: ***flex calc3.l***

Step 5: ***bison -dl -o y.tab.c calc3.y***

Step 6: ***gcc lex.yy.c y.tab.c interpet.c -o calc3***

Step 7: ***sudo chmod +x calc3***

Step 8: Create a file in the same directory as your calc3 file and name it: "**testApp.cal**" then edit that file with a sample code to test the program.

*An example of a sample code is given below: (see the next page)

```
x = 0;

while (x < 10)
{
   print x;
   x = x + 1;
}
```

Step 9: Save the file and execute the calc3 from your terminal using the following command:

sudo ./calc3 testApp.cal

Step 10: Check if you received an output of digits from 0 to 9.

Note that there is already a testing file accompanied with the package called: "**test.cal**" which you can also test the same way we mentioned above: ***./calc3 test.cal***

4). Resources and Sites:

*GCC, the GNU Compiler Collection: http://gcc.gnu.org/
*Bison - GNU parser generator: http://www.gnu.org/software/bison/
*The LEMON Parser Generator: http://www.hwaci.com/sw/lemon/
*The Lex and Yacc Page: http://dinosaur.compilertools.net/
*An A-Z Index of the Bash command line for Linux: http://ss64.com/bash/