

Note: This doc has my experience step by step trying to get the virtual assistant up and running, while it did look like it compiled when I tried the virtual assistant command nothing happens. This was being run on a Windows machine in visual studio using wsl.

- Catalog of Issues Found as I followed the readme for setting up and compiling:
 - Right off the bat, I tried the first setup instruction for the GNUstep speech engine and ran the install, it went well, but then during the say "hello" command I was hit with an error

```
abhi@DESKTOP-77CF8P4:/mnt/c/Users/abhib/OneDrive/Documents/Project-5-Starting-the-File-System/Virtual-Assistant/Virtual-Assistant$ sudo apt-get install gnustep-gui-runtime
[sudo] password for abhi:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
gnustep-gui-runtime is already the newest version (0.29.0-2build1).
0 upgraded, 0 newly installed, 0 to remove and 24 not upgraded.
abhi@DESKTOP-77CF8P4:/mnt/c/Users/abhib/OneDrive/Documents/Project-5-Starting-the-File-System/Virtual-Assistant/Virtual-Assistant$ say "hello"
ALSA lib confmisc.c:855:(parse_card) cannot find card '0'
ALSA lib conf.c:5178:(_snd_config_evaluate) function snd_func_card_inum returned error: No such file or directory
ALSA lib confmisc.c:422:(snd_func_concat) error evaluating strings
ALSA lib conf.c:5178:(_snd_config_evaluate) function snd_func_concat returned error: No such file or directory
ALSA lib confmisc.c:1334:(snd_func_refer) error evaluating name
ALSA lib conf.c:5178:(_snd_config_evaluate) function snd_func_refer returned error: No such file or directory
ALSA lib conf.c:5701:(snd_config_expand) Evaluate error: No such file or directory
ALSA lib pcm.c:2664:(snd_pcm_open_noupdate) Unknown PCM default
audio_open_alsa: failed to open audio device default. No such file or directory
```

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- The Firefox install step worked correctly.

```
abhi@DESKTOP-77CF8P4:/mnt/c/Users/abhib/OneDrive/Documents/Project-5-Starting-the-File-System/Virtual-Assistant/Virtual-Assistant$ sudo apt-get install firefox
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
firefox is already the newest version (1:1snap1-0ubuntu2).
0 upgraded, 0 newly installed, 0 to remove and 24 not upgraded.
```

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- Next, the readme lists three more installs, the first two went well

```
abhi@DESKTOP-77CF8P4:/mnt/c/Users/abhib/OneDrive/Documents/Project-5-Starting-the-File-System/Virtual-Assistant/Virtual-Assistant$ sudo apt-get install libcurl4-openssl-dev
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
libcurl4-openssl-dev is already the newest version (7.81.0-1ubuntu1.10).
0 upgraded, 0 newly installed, 0 to remove and 24 not upgraded.
abhi@DESKTOP-77CF8P4:/mnt/c/Users/abhib/OneDrive/Documents/Project-5-Starting-the-File-System/Virtual-Assistant/Virtual-Assistant$ sudo apt-get install libjson-c-dev
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
libjson-c-dev is already the newest version (0.15-3~ubuntu1.22.04.1).
0 upgraded, 0 newly installed, 0 to remove and 24 not upgraded.
```

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- I tried the GCC command and got this when trying to compile the code

```

Installation complete: Run using Virtual Assistant
abhi@DESKTOP-77CF8P4:/mnt/c/Users/abhib/OneDrive/Documents/Project-5-Starting-the-File-System/Virtual-Assistant/Virtual-Assistant$ gcc main.c src/init_config.c $(pkg-config --libs --cflags libcurl) -lssl -lcrypto -ljson-c -std-gnu11
In file included from src/email.c:11,
    from main.c:12:
src/ssl.c: In function 'ssl connect':
src/ssl.c:143:3: warning: 'ERR_load_BIO_strings' is deprecated: Since OpenSSL 3.0 [-Wdeprecated-declarations]
 143 |     ERR_load_BIO_strings();
      |     ^
In file included from /usr/include/openssl/cryptoerr.h:17,
    from /usr/include/openssl/crypto.h:38,
    from /usr/include/openssl/bio.h:30,
    from src/ssl.c:11,
    from main.c:12:
/usr/include/openssl/cryptoerr_legacy.h:31:27: note: declared here
 31 | OSSL_DEPRECATEDIN_3_0 int ERR_load_BIO_strings(void);
    |                               ^
In file included from main.c:69:
main.c: In function 'main':
src/response.c:82:28: warning: '%s' directive writing up to 99 bytes into a region of size 96 [-Wformat-overflow]
 82 |     sprintf(calendar, "cal %s", cal);
    |                   ~~~~~^~~~~
src/response.c:82:5: note: 'sprintf' output between 5 and 104 bytes into a destination of size 100
 82 |     sprintf(calendar, "cal %s", cal);
    |     ~~~~~^~~~~
src/response.c:81:5: warning: 'fgets' writing 1000 bytes into a region of size 100 overflows the destination [-Wstringop-overflow=]
 81 |     fgets(cal, 1000, stdin);
    |     ~~~~~^~~~~
In file included from main.c:10:
src/init_config.h:9:73: note: destination object 'cal' of size 100
  9 | char str[1000], *start, pv, location[1000], youtube[1000], songs[1000], cal[100], search[100];
    | ~~~~~^~~~~
In file included from main.c:1:
/usr/include/stdio.h:592:14: note: in a call to function 'fgets' declared with attribute 'access (write_only, 1, 2)'
 592 | extern char *fgets (char *__restrict __s, int __n, FILE *__restrict __stream)
    | ~~~~~^~~~~
In file included from main.c:69:
src/response.c:146:9: warning: 'fgets' writing 1000 bytes into a region of size 100 overflows the destination [-Wstringop-overflow=]
 146 |     fgets(search, 1000, stdin);
    |     ~~~~~^~~~~
In file included from main.c:10:
src/init_config.h:9:83: note: destination object 'search' of size 100
  9 | char str[1000], *start, pv, location[1000], youtube[1000], songs[1000], cal[100], search[100];
    | ~~~~~^~~~~
In file included from main.c:1:
/usr/include/stdio.h:592:14: note: in a call to function 'fgets' declared with attribute 'access (write_only, 1, 2)'
 592 | extern char *fgets (char *__restrict __s, int __n, FILE *__restrict __stream)
    | ~~~~~^~~~~
/usr/bin/ld: /tmp/ccRAHDWN.o(.bss+0x0): multiple definition of `str'; /tmp/ccbW1VW.o(.bss+0x11bc0): first defined here
/usr/bin/ld: /tmp/ccRAHDWN.o(.bss+0x3e8): multiple definition of `start'; /tmp/ccbW1VW.o(.bss+0x11fa8): first defined here
/usr/bin/ld: /tmp/ccRAHDWN.o(.bss+0x3f0): multiple definition of `pv'; /tmp/ccbW1VW.o(.bss+0x11fb0): first defined here
/usr/bin/ld: /tmp/ccRAHDWN.o(.bss+0x400): multiple definition of `location'; /tmp/ccbW1VW.o(.bss+0x11fc0): first defined here
/usr/bin/ld: /tmp/ccRAHDWN.o(.bss+0x800): multiple definition of `youtube'; /tmp/ccbW1VW.o(.bss+0x123c0): first defined here
/usr/bin/ld: /tmp/ccRAHDWN.o(.bss+0xc00): multiple definition of `songs'; /tmp/ccbW1VW.o(.bss+0x127c0): first defined here
/usr/bin/ld: /tmp/ccRAHDWN.o(.bss+0x1000): multiple definition of `cal'; /tmp/ccbW1VW.o(.bss+0x12bc0): first defined here
/usr/bin/ld: /tmp/ccRAHDWN.o(.bss+0x1080): multiple definition of `search'; /tmp/ccbW1VW.o(.bss+0x12c40): first defined here
/usr/bin/ld: /tmp/ccRAHDWN.o(.bss+0x1100): multiple definition of `HOMEDIR'; /tmp/ccbW1VW.o(.bss+0x12cc0): first defined here
/usr/bin/ld: /tmp/ccRAHDWN.o(.bss+0x1500): multiple definition of `WebBrowser'; /tmp/ccbW1VW.o(.bss+0x130c0): first defined here
/usr/bin/ld: /tmp/ccRAHDWN.o(.bss+0x1900): multiple definition of `MediaPlayer'; /tmp/ccbW1VW.o(.bss+0x134c0): first defined here
abhi@DESKTOP-77CF8P4:/mnt/c/Users/abhib/OneDrive/Documents/Project-5-Starting-the-File-System/Virtual-Assistant/Virtual-Assistant$

```

- List of issue sections:

```

142 | OpenSSL_add_all_algorithms();
143 | ERR_load_BIO_strings();
144 | ERR_load_crypto_strings();
145 | SSL_load_error_strings();
146 |
147 | obj_out = BIO_new_fp(stdout, BIO_NOCLOSE);
148 |
149 | if (SSL_library_init() < 0) {
150 | | BIO_printf(obj_out, "OpenSSL not initialize");
151 | } else {

```

PROBLEMS 12 OUTPUT TERMINAL DEBUG CONSOLE

Installation Complete: run using virtual_assistant
abhi@DESKTOP-77CF8P4:/mnt/c/Users/abhib/OneDrive/Documents/Project-5-Starting-the-File-System/Virtual-Assistant/Vi
rtual-Assistant/Virtual-Assistant\$ gcc main.c src/init_config.c \$(pkg-config --libs --cflags libcurl) -lssl -lcryp
to -ljson-c -std=gnu11
In file included from src/email.c:11,
from main.c:12:
src/ssl.c: In function 'ssl_connect':
src/ssl.c:143:3: warning: 'ERR_load_BIO_strings' is deprecated: Since OpenSSL 3.0 [-Wdeprecated-declarations]
143 | ERR_load_BIO_strings();
| ^~~~~~
In file included from /usr/include/openssl/cryptoerr.h:17,
from /usr/include/openssl/crypto.h:38,
from /usr/include/openssl/bio.h:30,
from src/ssl.c:11,
from src/email.c:11,
from main.c:12:
/usr/include/openssl/cryptoerr_legacy.h:31:27: note: declared here
31 | OSSL_DEPRECATEDIN 3 0 int ERR_load_BIO_strings(void);

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77 | } else if ((strcmp(str, "calendar") == 0) || (strcmp(str, "open calendar") == 0)) {
78 | | sprintf(tmp_string, "%s \"which year calendar you want to see\" 2>/dev/null", TTS);
79 | | system(tmp_string);
80 | | printf("Which year calendar you want to see? \n");
81 | | fgets(cal, 1000, stdin);
82 | | sprintf(calendar, "cal %s", cal);
83 | | system(calendar);
84 |
85 | }else if(strcmp(str,"math") == 0) {
86 | | sprintf(tmp_string, "%s \"what can i calculate for you\" 2>/dev/null", TTS);
87 | | system(tmp_string);
88 | |
89 | |
90 | |
91 | |
92 | |
93 | |
94 | |
95 | |
96 | |
97 | |
98 | |
99 | |

```

PROBLEMS 18 OUTPUT TERMINAL DEBUG CONSOLE

In file included from main.c:69:
main.c: In function 'main':
src/response.c:82:28: warning: '%s' directive writing up to 99 bytes into a region of size 96 [-Wformat-overflow=]
82 | sprintf(calendar, "cal %s", cal);
| ^~~~~~
src/response.c:82:5: note: 'sprintf' output between 5 and 104 bytes into a destination of size 100
82 | sprintf(calendar, "cal %s", cal);
| ^~~~~~
src/response.c:81:5: warning: 'fgets' writing 1000 bytes into a region of size 100 overflows the destination [-Wstringop-overflow=]
81 | fgets(cal, 1000, stdin);

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```
8
9 char str[1000], *start, pv, location[1000], youtube[1000], songs[1000], cal[100], search[100];
10
11 /***Init funtions***/
3 PROBLEMS (21) OUTPUT TERMINAL DEBUG CONSOLE
6 In file included from main.c:10:
9+ src/init_config.h:9:73: note: destination object 'cal' of size 100
9 | char str[1000], *start, pv, location[1000], youtube[1000], songs[1000], cal[100], search[100];
|
In file included from main.c:1:
/usr/include/stdio.h:592:14: note: in a call to function 'fgets' declared with attribute 'access (write_only, 1, 2)'
592 | extern char *fgets (char * __restrict __s, int __n, FILE * __restrict __stream)
|
In file included from main.c:69:
src/response.c:146:9: warning: 'fgets' writing 1000 bytes into a region of size 100 overflows the destination [-Wstringop-overflow=]
146 |         fgets(search, 1000, stdin);
|
In file included from main.c:10:
src/init_config.h:9:83: note: destination object 'search' of size 100
9 | char str[1000], *start, pv, location[1000], youtube[1000], songs[1000], cal[100], search[100];
|
In file included from main.c:1:
/usr/include/stdio.h:592:14: note: in a call to function 'fgets' declared with attribute 'access (write_only, 1, 2)'
592 | extern char *fgets (char * __restrict __s, int __n, FILE * __restrict __stream)
|
/usr/bin/ld: /tmp/ccRAHDVN.o(.bss+0x0): multiple definition of `str'; /tmp/ccbM1VWV.o(.bss+0x11bc0): first defined here
/usr/bin/ld: /tmp/ccRAHDVN.o(.bss+0x3e8): multiple definition of `start'; /tmp/ccbM1VWV.o(.bss+0x11fa8): first defined here
/usr/bin/ld: /tmp/ccRAHDVN.o(.bss+0x3f0): multiple definition of `pv'; /tmp/ccbM1VWV.o(.bss+0x11fb0): first defined here
/usr/bin/ld: /tmp/ccRAHDVN.o(.bss+0x400): multiple definition of `location'; /tmp/ccbM1VWV.o(.bss+0x11fc0): first defined here
/usr/bin/ld: /tmp/ccRAHDVN.o(.bss+0x800): multiple definition of `youtube'; /tmp/ccbM1VWV.o(.bss+0x123c0): first defined here
/usr/bin/ld: /tmp/ccRAHDVN.o(.bss+0xc00): multiple definition of `songs'; /tmp/ccbM1VWV.o(.bss+0x127c0): first defined here
/usr/bin/ld: /tmp/ccRAHDVN.o(.bss+0x1000): multiple definition of `cal'; /tmp/ccbM1VWV.o(.bss+0x12bc0): first defined here
/usr/bin/ld: /tmp/ccRAHDVN.o(.bss+0x1080): multiple definition of `search'; /tmp/ccbM1VWV.o(.bss+0x12c0): first defined here
/usr/bin/ld: /tmp/ccRAHDVN.o(.bss+0x1100): multiple definition of `HOMEDIR'; /tmp/ccbM1VWV.o(.bss+0x12cc0): first defined here
/usr/bin/ld: /tmp/ccRAHDVN.o(.bss+0x1500): multiple definition of `WebBrowser'; /tmp/ccbM1VWV.o(.bss+0x130c0): first defined here
/usr/bin/ld: /tmp/ccRAHDVN.o(.bss+0x1900): multiple definition of `MediaPlayer'; /tmp/ccbM1VWV.o(.bss+0x134c0): first defined here
abhi@DESKTOP-77CF8P4: /mnt/c/Users/abhib/OneDrive/Documents/Project-5-Starting-the-File-System/Virtual-Assistant/Virtual-Assistant/Virtual-Assistant$
```