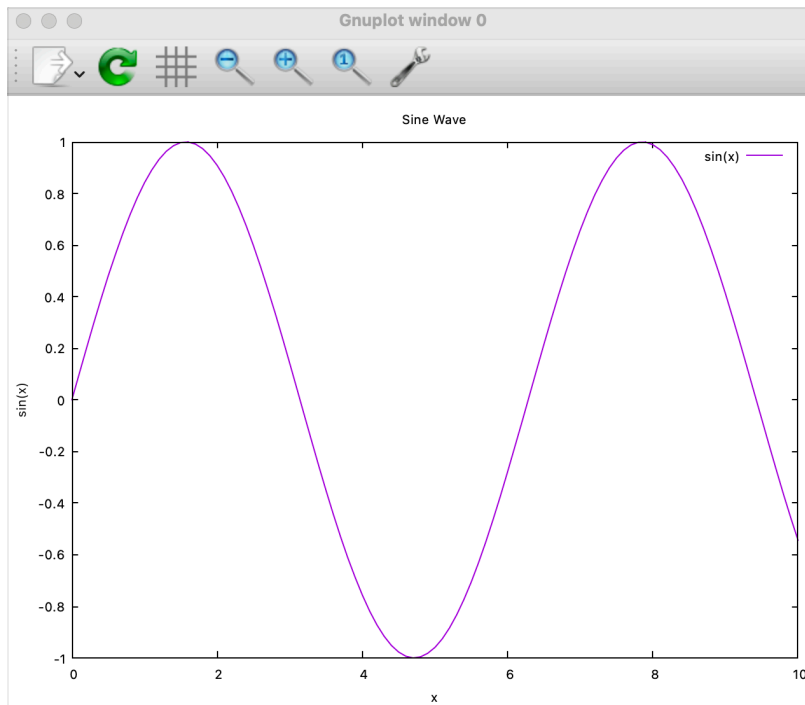


```
...
sudo: apt: command not found
kaipuila@Kais-MacBook-Air ~ % brew install gnuplot
==> Fetching downloads for: gnuplot
==> Downloading https://ghcr.io/v2/homebrew/core/gnuplot/manifests/6.0.3-2
##### 100.0%
==> Fetching dependencies for gnuplot: libpng, freetype, libunistring, gettext, fontconfig, pcre2, glib, xorgproto,
libxau, libxdmcp, libxcb, libx11,
```

```
....

kaipuila@Kais-MacBook-Air Documents % cd Cplots
kaipuila@Kais-MacBook-Air Cplots % clang -o sine_plot sine_plot.c -lm
kaipuila@Kais-MacBook-Air Cplots % ls
data.txt  sine_plot sine_plot.c
kaipuila@Kais-MacBook-Air Cplots % ./sine_plot
```



```
kaipuila@Kais-MacBook-Air Cplots % cat sine_plot.c
```

```
#include <stdio.h>
#include <math.h>

int main() {
    // Step 1: Open a pipe to GNUplot
    FILE *gp = popen("gnuplot -persist", "w");
    if (!gp) {
        fprintf(stderr, "Error opening GNUplot\n");
        return 1;
    }

    // Step 2: Generate and write data to a file
    FILE *data = fopen("data.txt", "w");
    if (!data) {
        fprintf(stderr, "Error opening data file\n");
        pclose(gp);
        return 1;
    }
}
```

```
// Generate sine wave data (x, sin(x))
for (double x = 0; x <= 10; x += 0.1) {
    fprintf(data, "%f %f\n", x, sin(x));
}
fclose(data);

// Step 3: Send GNUplot commands
fprintf(gp, "set title 'Sine Wave'\n");           // Set title
fprintf(gp, "set xlabel 'x'\n");                 // X-axis label
fprintf(gp, "set ylabel 'sin(x)'\n");            // Y-axis label
fprintf(gp, "plot 'data.txt' with lines title 'sin(x)'\n"); // Plot command

// Step 4: Flush and close GNUplot
fflush(gp);
pclose(gp);

return 0;
```