

Basic MATLAB guide

1. Access a pc system with matlab.
2. Launch it and change working directory.
3. To create a new Matlab program, click the 'File' menu and choose 'New' and 'M-file'.
4. To open an existing program, select 'open' in the 'File' menu.
5. Save your M-file as filename.m (for example, test.m)
6. To run your 'M-file' program, press F5 key while in the program window.
7. To plot one curve, use **plot(x,y)**; To plot two curves, use **plot(x, y1, '-', x, y2, '-')**.
8. To plot two curves in the same figure with different scales, use **plotyy(x,y1,x,y2)**.
9. To generate two subplots in one figure,
use **subplot(2,1,1), plot(x,y1), subplot(2,1,2), plot(x,y2)**
10. Use **xlabel('your label text')** to label the x-axis, similar for y-axis.
11. 'Help' function is provided for the MATLAB command. For example, type "**help plot**" in the command window to get various plot commands.

An example program to generate an x-y plot:

```
for i=1:100           %generate array with 100 data points
    x(i)=0.1*(i-1);    %x-array
    y(i)=2+5*x(i);     %y-array
end
plot(x,y)
xlabel('x')
ylabel('y')
grid on % show grid in the plot
```