1. **Unix–operating system.** Familiarize yourself with the Unix–operating system. Using the graphical user interface, see what programs are installed on your desktop. Open a console shell. Try the following commands.

List the contents of a directory	`ls`	Change directory	`cd`
Make a new directory	`mkdir`	Copy a file	`cp`
Move or rename a file	`mv`	Remove a file or files	`rm`
Remove a directory	`rmdir`		
Manual page for a command	`man`	Info page	`info`

2. **The Emacs editor.** Familiarize yourself with the Emacs editor. Emacs has a built-in tutorial for new users, which can be invoked with `C-h t`. Here's a short summary of useful commands you should try.

Prev. line	`C-p`	Next line	`C-n`
Backwards	`C-b`	Forwards	`C-f`
Go to top	`C-<`	Go to end	`C->`
Start of line	`C-a`	End of line	`C-e`
Undo	`C-_`		
Delete characters	`<bs>`, `<del>`, `C-d`	Start selection	`C-<space>`
Cut	`C-w`	Copy	`Meta-w`
Cut line	`C-k`	Paste	`C-y`
Open file	`C-x C-f`	Save	`C-x C-s`
Exit Emacs	`C-x C-c`		

3. **A simple `C` program.** Write the following program using the Emacs editor, then compile it and correct any errors you may have.

```
/*This program prints the values of the function   */
/*    f(x) = cos(x) + sin(x)*exp(-x*x/2)            */
/*    at n points on an interval given by the user.*/

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

int main(void){
      int i, n;
      float x, xi, xf, dx, y;
      printf("Numerical␣Programming␣Ex.1.3\n");
      printf("Give␣start␣and␣end␣points␣");
      printf("and␣the␣number␣of␣points.\n");
      scanf("%f␣%f␣%d",&xi,&xf,&n);
      dx = (xf-xi)/(n-1);
      for(i=0;i<n;i++){
        x = xi + i*dx;
        y = cos(x) + exp(-0.5*x*x)*sin(x);
        printf("%f␣%f\n",x, y);
```

```
        }
      return 0;
}
```

After succesfully compiling the source code, run the program.