Result

Problem 2

```
if __name__=='__main__':
    letter=Letter("Dooly","Dankook")
    letter.addline("Everyone in our school always do the best.")
    letter.addline("They have their own plan for the future.")
    letter.get_text()

minhyeok@minhyeok-VirtualBox:~/homework2$ python3 problem2.py
Dear Dankook :

Everyone in our school always do the best.
They have their own plan for the future.


Sincerely,

Dooly

minhyeok@minhyeok-VirtualBox:~/homework2$ ▮
```

Problem 3

```
if __name__=='__main__' :
    while(1):
        a=int(input("input number ->(1: sphere 2: cylinder 3: cone) "))
        if(a==1):
            v1=int(input("volume -> "))
            b=int(input("input number(1 : volume , 2 : surface 3 : all) -> "))
            if(b==1):
                print("sphere volume : ", sphere_volume(v1))
            elif(b==2):
                print("sphere surface : ", sphere_surface(v1))
            elif(b==3):
                print("sphere volume : ", sphere_volume(v1))
                print("sphere surface : ", sphere_surface(v1))
            else:
                break
        elif(a==2):
            v2=int(input("volume -> "))
            h2=int(input("height -> "))
            c=int(input("input number(1 : volume, 2 : surface 3 : all) -> "))
            if(c==1):
                print("cylinder volume : ", cylinder_volume(v2,h2))
            elif(c==2):
                print("cylinder surface : ", cylinder_surface(v2,h2))
```

```
            elif(c==3):
                print("cylinder volume : ", cylinder_volume(v2,h2))
                print("cylinder surface : ", cylinder_surface(v2,h2))
            else:
                break
        elif(a==3):
            v3=int(input("volume -> "))
            h3=int(input("height -> "))
            d=int(input("input number(1 : volume, 2 : surface 3 : all) -> "))
            if(d==1):
                print("cone volume : ", cone_volume(v3,h3))
            elif(d==2):
                print("cone surface : ", cone_surface(v3,h3))
            elif(d==3):
                print("cone volume : ", cone_volume(v3,h3))
                print("cone surface : ", cone_surface(v3,h3))
            else:
                break
        else:
            continue
        choice=int(input("1 : continue 2 : exit"))
        if(choice==1):
            continue
        else:
            break
```

```
input number ->(1: sphere 2: cylinder 3: cone) 2
volume -> 5
height -> 5
input number(1 : volume, 2 : surface 3 : all) -> 1
cylinder volume :  392.69908169872417
1 : continue 2 : exit1
input number ->(1: sphere 2: cylinder 3: cone) 2
volume -> 5
height -> 5
input number(1 : volume, 2 : surface 3 : all) -> 2
cylinder surface :  314.1592653589793
1 : continue 2 : exit1
input number ->(1: sphere 2: cylinder 3: cone) 2
volume -> 5
height -> 5
input number(1 : volume, 2 : surface 3 : all) -> 3
cylinder volume :  392.69908169872417
cylinder surface :  314.1592653589793
1 : continue 2 : exit1
input number ->(1: sphere 2: cylinder 3: cone) 3
volume -> 5
height -> 5
input number(1 : volume, 2 : surface 3 : all) -> 1
cone volume :  130.89969389957471
1 : continue 2 : exit1
input number ->(1: sphere 2: cylinder 3: cone) 3
volume -> 5
height -> 5
input number(1 : volume, 2 : surface 3 : all) -> 2
cone surface :  268.1517061334488
1 : continue 2 : exit1
input number ->(1: sphere 2: cylinder 3: cone) 3
volume -> 5
height -> 5
input number(1 : volume, 2 : surface 3 : all) -> 3
cone volume :  130.89969389957471
cone surface :  268.1517061334488
1 : continue 2 : exit2
```

Problem 5

```
minhyeok@minhyeok-VirtualBox:~/make_test$ vi Makefile
minhyeok@minhyeok-VirtualBox:~/make_test$ make
gcc -c -o main.o main.c -W -Wall
gcc -c -o sort.o sort.c -W -Wall
gcc -c -o print.o print.c -W -Wall
gcc -o homework_problem5 main.o sort.o print.o -W -Wall
minhyeok@minhyeok-VirtualBox:~/make_test$ ls
CMakeLists.txt  homework_problem5  include.h  main.o   print.o  sort.o
Makefile        include            main.c     print.c  sort.c   src
minhyeok@minhyeok-VirtualBox:~/make_test$ ./homework_problem5
inserstion sort:
6 7 1 2 3 4 5
1 6 7 2 3 4 5
1 2 6 7 3 4 5
1 2 3 6 7 4 5
1 2 3 4 6 7 5
1 2 3 4 5 6 7
bubble sort:
1 2 3 4 5 6 7
1 2 3 4 5 6 7
1 2 3 4 5 6 7
1 2 3 4 5 6 7
1 2 3 4 5 6 7
1 2 3 4 5 6 7
selection sort:
1 2 3 4 5 6 7
1 2 3 4 5 6 7
1 2 3 4 5 6 7
1 2 3 4 5 6 7
1 2 3 4 5 6 7
1 2 3 4 5 6 7
quick sort:
7 6 1 2 3 4 5
7 6 1 2 3 4 5
7 6 1 2 3 4 5
7 6 1 2 3 4 5
7 6 1 2 3 4 5
7 6 1 2 3 4 5
```

Problem 6

```
minhyeok@minhyeok-VirtualBox:~/make_test$ ls
CMakeCache.txt  CMakeLists.txt  cmake_install.cmake  include
CMakeFiles      Makefile        homework_problem5    src
minhyeok@minhyeok-VirtualBox:~/make_test$ ./homework_problem5
inserstion sort:
6 7 1 2 3 4 5
1 6 7 2 3 4 5
1 2 6 7 3 4 5
1 2 3 6 7 4 5
1 2 3 4 6 7 5
1 2 3 4 5 6 7
bubble sort:
1 2 3 4 5 6 7
1 2 3 4 5 6 7
1 2 3 4 5 6 7
1 2 3 4 5 6 7
1 2 3 4 5 6 7
1 2 3 4 5 6 7
selection sort:
1 2 3 4 5 6 7
1 2 3 4 5 6 7
1 2 3 4 5 6 7
1 2 3 4 5 6 7
1 2 3 4 5 6 7
1 2 3 4 5 6 7
quick sort:
7 6 1 2 3 4 5
7 6 1 2 3 4 5
7 6 1 2 3 4 5
7 6 1 2 3 4 5
7 6 1 2 3 4 5
7 6 1 2 3 4 5
```