

## Lab4

---

**Deadline: April 9<sup>th</sup> at 1:00 p.m.**

- A. Use g++ to compile the following program, and then use nm to list symbols of the executable file. What encoded identifiers are used for the functions?

```
1  double average(double * n1, double & n2)
2  {
3      return ((*n1 + n2) / 2.0);
4  }
5  int average(int n1, float n2)
6  {
7      return ((n1 + n2) / 2);
8  }
9  int main()
10 {
11     return 0;
12 }
```

- B. What is the output of the following program? Why?

```
1  #include <iostream>
2  using namespace std;
3  int main()
4  {
5      char a, *pa;
6      int b, *pb;
7      float c, *pc;
8      double d, *pd;
9
10     cout << sizeof(a) << " " << sizeof(pa) << endl;
11     cout << sizeof(b) << " " << sizeof(pb) << endl;
12     cout << sizeof(c) << " " << sizeof(pc) << endl;
13     cout << sizeof(d) << " " << sizeof(pd) << endl;
14     return 0;
15 }
```

**Hand-in Rules**

Pack your files into a zip, rar or tar file and upload to Moodle, which includes a simply *README* file showing your answers for the two questions.

Department of Electrical Engineering, National Cheng Kung University