The University of the South Pacific

School of Computing, Information & Mathematical Sciences

CS 112 Data Structures and Algorithms

Tutorial Week 4

In this tutorial you will be modifying some sample programs given in week 1. All the programs can be downloaded from week 1 section of moodle. Do all 4 questions given below:

1. Modify question wk1.1 to print the address of variable *sum*.

2. Modify question wk1.8: create a new float pointer, say *ptr_double_array* to fill *double_array* array instead of directly filling values using array. [Hint: see lecture 3.1 slide 7 to fill an array using a pointer]

3. Modify question wk1.7 to use a pointer instead of passing a variable by reference in a function *do_sum_by_ref*. Your new prototype would appear as *do_sum_by_ref(float a, float b, float *sum).*

4. Modify question wk1.9 to use a pointer instead of array in the argument of a function *sum_of_double*. Your function prototype would become *sum_of_double(float *dbl_array, int size).*

5. [Optional but recommended] if you have time try to convert parallel arrays of Lab2 into a single array of students struct. Here you need to create a student struct first as shown below:

```
struct Student{
   string id;
   int marks;
   char grade;
};
```

   Now you can create array of student simply by writing Student s[MAX_SIZE];

After completing all 4 questions you can work on your assignment.

- Anurag Sharma