|  |  |
| --- | --- |
| **Week 8 Task** | **Title: Pointers** |
| **Name and Student ID** |  |

**Tutorial Task(s)**

1. Why pointer is used?
2. Why pointer should have data types when their size is always 4 bytes( in a32 bit machine), irrespective of the variable they are pointing to?
3. What is wrong with following code segment?
   1. Int \*p;
   2. \*p=10;
4. Does C have “pass by reference” feature?
5. What is wild pointer in C?
6. Is a null pointer same as an uninitialized pointer?
7. What are the uses of null pointers?
8. Is NULL always defined as 0?
9. Since 0 is used to represent the null pointer, can it be thought of as an address with all zero bits?
10. What is array of pointer? How it is declared?
11. Explain the relationship between array and pointer
12. Why is the addition of two pointer is impossible?
13. Explain the comparison of two pointer?
14. What is the difference between arr and &arr where arr is an array name , though both displays the base address of the array?
15. When to use pointer to a function?
16. What are uses of dynamic memory allocation?
17. What happened if malloc() is called?
18. Difference between malloc() and calloc()
19. How does one pointer point to another pointer?
20. Describe the two different ways to specify the address of an array element?
21. Explain the terms: a) Dangling pointer b) function pointer c) Garbage collection d) Stack e) Static memory allocation

Practice!!!

Write a program that reads in up to 10 strings or to EOF, whichever comes first. Have it offer the user a menu with five choices: print the original list of strings, print the strings in alphabetical order, print the strings in order of increasing length, print the strings in order of the length of the first word in the string, and quit. Have the menu recycle until the user enters the quit request. The program, of course should actually perform the promised tasks.