**Operating Systems Lab**

**Wednesday January 24, 2018**

You may work together with someone else on completing this assignment, but each person should write and submit a solution individually.

1. Examine the following code which reads lines from a file into an array of strings.

* Write a loop that traverses the array, and for each string in the array, calls a function with the signature

void reverse ( char \*str );

Also write the function **reverse**, which reverses its string argument (e.g., “what?” becomes “?tahw” )

* Write a second loop that sorts the array, in place, by the length of each string (longest to shortest).
* Write a third loop that prints each string, and then frees the memory for it.

#define MAX\_LINES 10

#define BUFSZ 128

int main()

{

int i = 0, count = 0;

char \*lines[MAX\_LINES];

char buf[BUFSZ];

FILE \*fp;

if ( ( fp = fopen( "something.txt", "rw" )) == NULL )

exit( -1 );

while ( fgets( buf, BUFSZ-1, fp ) != NULL && i < MAX\_LINES )

{

lines[i] = (char \*) malloc( strlen(buf) + 1 );

strcpy( lines[i], buf );

i++;

count++;

}

}