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CIS\_126 08/19/18

**Unit 4 Graded Assignment 1**

**Part 1**

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1. Describe how the following Input/Output Functions work: fgets(), putchar(), getchar(), and puts().

**Fgets()** *: is a function that will read a stream of string input & store the location in a pointer. We can specify the size of character we want to read and store from the stream input.*

**Putchar()** : *prints a single character to output stream.*

**Getchar()** : reads an input of a character & stores value as an int.

**Puts()** : prints *a string of characters and breaks a new line.*

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1. Chapter 8 in your textbook discusses different functions that can manipulate and search strings of data. Please list and explain one. Include the header file that is coincides with and provide a real-world example of when you would use it.

*There are many header files that can manipulate search strings contained in <string.h> , <ctype.h>or <stdlib.h> . String.h library for example contains, the following:*

**String.h**

* strcat - *concatenate two* ***strings****.*
* strchr - *string scanning operation.*
* strcmp - *compare two* ***strings****.*
* strcpy - *copy a* ***string****.*
* strlen - *get* ***string*** *length.*
* strncat - *concatenate one* ***string*** *with part of another.*
* strncmp - *compare parts of two* ***strings****.*

*A popular way to manipulating strings is by concatenating two strings with strcat. StrCat takes in two Char pointers in memory & returns a char pointer. We can combine two strings into 1 & store it into a single point in memory.*

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1. In regards to output, what is a format control string? Please define its characteristics: conversion specifiers, flags, field widths, precisions, and literal characters. Provide a syntax example.

*Format control string is a what we use to display a modified output stream of a specific data type. Conversion specifiers is how we choose to format a particular data-type, ‘%d’ to print an int place holder. Printing precision is specifying the size of the value type to a degree, I can specify if a float value should be printed up to 2 decimal places with ‘%.2lf‘ or print/scan up to 20 characters with ‘%20s’ .*

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1. When reading formatted input using a scanf() statement we have to make sure that we include the correct conversion specifier which needs to match up with the variables declared datatype. Please name the data types that correspond with the following conversion specifiers: %d, %c, %s, %f, and %p.

*‘%d’ is assigned to an int variable type. ‘%c’ is assigned to a char variable type. ‘%s’ is assigned to a string variable type. ‘%f’ is assigned to a floating variable type. ‘%p’ is assigned to a pointer or memory address format.*