**Take-Home Quiz 7 (15 pts) – Strings and Structs**

Using Canvas <https://canvas.wsu.edu/>, please submit your solution to the correct quiz folder. Your solution should be a .pdf file with the name <your last name>\_quiz7.pdf and uploaded. To upload your solution, please navigate to your correct Canvas ***lab*** course space. Select the “Assignments” link in the main left menu bar. Navigate to the correct quiz submission folder. Click the “Start Assignment” button. Click the “Upload File” button. Choose the appropriate .pdf file with your solution. Finally, click the “Submit Assignment” button.

1. (5 pts) What is a *struct*? Explain.

A struct is a datatype that acts like a “package” containing a variety of data which could be different datatypes encapsulated under one name/type.

1. (10 pts) Answer the following questions (a.-f.) based on the array declaration below. **NOTE: operations for questions b-f are cumulative:**

char car[15] = "Audi", animal[10] = "cat";

* 1. (5 pts) Fill in each empty rectangle below with the appropriate contents for the array named car. You may choose an appropriate *starting* address.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Index | 0 | 1 | 2 | 3 | 4 |
| Contents | ‘A’ | ‘u’ | ‘d’ | ‘i’ | ‘\0’ |
| Address | &100 | &101 | &102 | &103 | &104 |

* 1. (1 pt) The contents of animal[4] after the call strcpy(animal, car)

is ‘\0’\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

* 1. (1 pt) The value of strlen(animal) is 4\_\_\_\_\_\_\_\_\_\_\_\_.
  2. (1 pt) The value of strcmp(car, "audi") is: negative, positive, or zero?

negative

* 1. (1 pt) The contents of car after the call strncpy(car, "Honda", 3)

is \_\_\_\_”Honi”\_\_\_ \_\_\_\_\_\_ .

* 1. (1 pt) The contents of animal[0] after the call

strncat(animal, "bear", 2)is:\_\_\_\_\_’A’\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.