

HW #10

Pdf file only, with heading:

HW #10

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Due: 11:00 pm, Sunday Nov. 18, 2018 at Google Classroom

1. (10 pts) Consider the following code.

```
char str[20];
int x, y;
scanf("%d%s%d", &x, str, &y);
```

What will be the values of x, y and str if the user types the following:
100dogsand1 200dogsand2

x = 100
str = dogsand1
y = 200

2. (20 pts) What is the value of movie after each statement (lines 2-5)?

```
char movie[100];
strcpy(movie, "Beauty and the Beast");          /* Line 2 */
movie[4] = '\0';                                /* Line 3 */
strcpy(movie + 4, "!");                          /* Line 4 */
strcat(movie, "- Disney");                       /* Line 5 */
```

Line 2: Beauty and the Beast
Line 3: Beau
Line 4: Beau!
Line 5: Beau!- Disney

3. (30 pts) Write statements for the following. Make sure to declare any variables needed.

- a. (10 pts) Read a string called string1 from the standard input (at most 100 characters). Your string must not unnecessarily waste space.

char string1[100];
scanf("%s", string1);

- b. (10 pts) Create a new string by duplicating the above string1 into string2 (for example, if string 1 is knock, string 2 becomes knockknock). Your string2 must not unnecessarily waste space.

```
for (int i = 0; i < 2; i++)  
    strcat(string2, string1);
```

- c. (10 pts) Print the above string2 to standard output
printf("%s", string2);

4. (20 pts) Consider the following function:

```
void changeit(char *value) {  
    char *p;  
    for (p = value; *p != '\0'; p++)  
        *p = --(*p);  
    puts(value);  
}
```

- (a) (10 pts) What is the output of changeit("Monday") ?

Program does not work. C doesn't allow conversion from string literals to char pointers

- (b) (10 pts) What is the output of the following two statements?
char input[20] = "Monday";
changeit(input);

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5. (20 pts) Consider the following string:

```
char oscarWilde[200] = "I can resist everything except temptation" ;
```

- (10 pts) Write a statement to print the substring starting at *everything*
printf("%s", oscarWilde + 13);
- (10 pts) Write a single statement so oscarWilde ends at *everything*
oscarWilde[23] = '\0';