**ECE 2220: System Programming Concepts** **Fall 2016**
**Problem Set 5** **Due: by 1:25 pm, Monday, October 17**

Assigned reading: Hoover, Chapter 4. Each problem is worth 10 points

From Chapter 4, starting on page 127

1. Number 7
2. Number 8
3. Number 9
4. Number 10
5. Number 12
6. Number 13

7. Given the following declarations:

```
struct s1 { char *b; };

struct s2 { char a[10]; };

struct s3
{ char *c;
  struct s1 *s;
  struct s2 t;
};
```

Correct the errors in the following code:

```
int main(int argc, char *argv[])
{
  struct s3 *st;

  st = (struct s3*)malloc(sizeof(s3));

  st.s = (struct s1*)malloc(sizeof(s1));

  st->s.b = (char *)malloc(strlen("CLEMSON"));

  strcpy("CLEMSON", st->s->b);

  strcpy(st->t->a, "TIGERS");
}
```

8. Use the declarations below to write the code necessary to store the details about **`clemson`**. Store the string "Clemson" in memory pointed to by **`Location`**, store the strings "Orange" and "Purple" as the primary and secondary themes, respectively, and store "Tigers" into the **`cartoon`** member **`animal`** without using any other variables other than **`clemson`** which is already declared. A key concept is to notice the difference in how the color structure is used compared to the mascot and school structures. Also, note when a **`->`** versus a dot (**`.`**) is needed. For some of the operations, a **`malloc`** is required, but for others it is not.

```
struct Mascot {
  char *animal;
  char *vegetable;
  char *mineral;
};
struct Color {
  char primary[10];
  char secondary[10];
};
struct School {
  char *Location;
  struct Mascot *cartoon;
  struct Color theme;
};

int main(void)
{
   struct School *clemson;
```

Turn in a paper copy of your solutions in class. Do not submit electronically. While we have a policy for late submission of programming assignments, late submission of homework assignments will not be accepted.