**1)** (10 pts) DSN (Dynamic Memory Management in C)

Consider the following struct, which contains a string and its length in one nice, neat package:

```
typedef struct smart_string {
  char *word;
  int length;
} smart_string;
```

Write a function that takes a string as its input, creates a new *smart_string* struct, and stores a **new copy of that string** in the *word* field of the struct and the length of that string in the *length* member of the struct. The function should then return a pointer to that new *smart_string* struct. Use dynamic memory management as necessary. The function signature is:

```
smart_string *create_smart_string(char *str) {




}
```

Now write a function that takes a *smart_string* pointer (which might be NULL) as its only argument, frees all dynamically allocated memory associated with that struct, and returns NULL when it's finished.

```
smart_string *erase_smart_string(smart_string *s) {




}
```