Problem 2.1

```c
#include <stdlib.h>
#include <string.h>
#include <stdio.h>

char *strdup(const char *s)
{
    char *p = NULL;
    size_t len;

    if (s) {
        len = strlen(s);
        p = malloc(len+1);
        if (p) {
            strcpy(p, s);
        }
    }
    return p;
}

int main()
{
    static char m[] = "Hello World!";
    char *p = strdup(m);
    if (!p) return EXIT_FAILURE;
    return (puts(p) == EOF);
}
```

Text segment:
main(), strdup(const shar*)
Data segment:
m[] – Line 22.
Heap segment:
p – Line 12.
Stack segment:
*p – Line 23, *s – Line 5, *p – Line 7, len – Line 8.

Notes:
Text segment contains the code which must be run, so it stores all the functions text if we keep in mind that only textual code is stored in this segment. The variables of the text segment are allocated in stack for local variables and data for global and static variables.

I wrote the pointer p twice because *p

Problem 2.2

Code is included in the zip file. Here are some screenshots of it being tested: