CSC 209 Review 8 Solution

September 10, 2020

1.
```c
int *my_malloc (int n) {
    int *res;

    res = malloc(n * sizeof(int));
    if (res == NULL) {
        perror("Allocation failed.");
    }

    return res;
}
```

Please see `question_1.c` for details.

2.
```c
char *duplicate(char *str) {
    char *res;

    res = malloc(strlen(str) + 1);
    if (res == NULL) {
        return res;
    }

    strcpy(res, str);

    return res;
}
```

Please see `question_2.c` for details.

3.
```c
int *create_array(int n, int initial_value) {
    int *p, *res;

    res = malloc(n * sizeof(int));

    if (res == NULL) {
        return res;
    }
```

```
10          for (p = res; p < res + n; p++) {
11              *p = initial_value;
12          }
13
14          return res;
15      }
```