

```
1  #include <stdio.h>
2  #include <string.h>
3  #include <stdlib.h>
4
5  #define DAYS 3
6
7  struct activity {
8      char *nday; // Day name (e.g., Monday)
9      int dday; // Date of the day
10     char *desc; // Activity description
11 };
12
13 typedef struct activity Plan;
14
15 Plan* create() {
16     Plan *t = (Plan *) malloc(sizeof(Plan) * DAYS); // Allocate for DAYS (3)
17     if (t == NULL) {
18         printf("Sufficient memory not allocated\n");
19         return NULL; // Return NULL if memory allocation fails
20     }
21     return t;
22 }
23
24 void read(Plan *p) {
25     int i;
26     for (i = 0; i < DAYS; i++) {
27         p[i].nday = (char *) malloc(9 * sizeof(char)); // Allocate memory for
// day name
28         if (p[i].nday == NULL) {
29             printf("Memory allocation failed for day name.\n");
30             return; // Return if memory allocation fails
31         }
32
33         printf("Enter name of the day: ");
34         scanf(" %s", p[i].nday); // Read day name
35
36         printf("Enter date of the day: ");
37         scanf("%d", &(p[i].dday)); // Read date of the day
38
39         printf("Enter description of the activity: ");
40         p[i].desc = (char *) malloc(400 * sizeof(char)); // Allocate memory
// for description
41         if (p[i].desc == NULL) {
42             printf("Memory allocation failed for description.\n");
43             return; // Return if memory allocation fails
44         }
45
46         // Read activity description
47         scanf(" %[^\n]", p[i].desc);
48
49         // Reallocate to reduce the memory used for the description (trim
// excess)
50         p[i].desc = (char *) realloc(p[i].desc, strlen(p[i].desc) + 1);
```

```
51         if (p[i].desc == NULL) {
52             printf("Memory reallocation failed for description.\n");
53             return; // Return if reallocation fails
54         }
55     }
56 }
57
58 void display(Plan *p) {
59     int i;
60     printf("**** Activity description for %d days ****\n", DAYS);
61     for (i = 0; i < DAYS; i++) {
62         printf("\nName of the day: %s", p[i].nday);
63         printf("\nDate of the day: %d", p[i].dday);
64         printf("\nActivity description: %s\n", p[i].desc);
65     }
66 }
67
68 int main() {
69     Plan* cal = NULL;
70     cal = create();
71
72     if (cal == NULL) {
73         printf("Memory allocation failed.\n");
74         return -1; // Exit the program if memory allocation fails
75     }
76
77     read(cal);
78     display(cal);
79     return 0;
80 }
```