

```
#include <stdio.h>
```

```
#include <stdlib.h>
```

```
#include <string.h>
```

```
// Structure of type student
```

```
struct student {
```

```
    int stud_id;
```

```
    int name_len;
```

```
    int struct_size;
```

```
    char stud_name[0];
```

```
    // variable length array must be
```

```
    // last.
```

```
};
```

```
// Memory allocation and initialisation of structure
```

```
struct student* createStudent(struct student* s, int id,
```

```
    char a[])
```

```
{
```

```
    s = alloca(sizeof(*s) + sizeof(char) * strlen(a));
```

```
    s->stud_id = id;
```

```
    s->name_len = strlen(a);
```

```
    strcpy(s->stud_name, a);
```

```
    s->struct_size
```

```

        = (sizeof(*s)
          + sizeof(char) * strlen(s->stud_name));

    return s;
}

// Print student details
void printStudent(struct student* s)
{
    printf("Student_id : %d\n"
           "Stud_Name : %s\n"
           "Name_Length: %d\n"
           "Allocated_Struct_size: %d\n\n",
           s->stud_id, s->stud_name, s->name_len,
           s->struct_size);

    // Value of Allocated_Struct_size here is in bytes.
}

// Driver Code
int main()
{
    struct student *s1, *s2;

    s1 = createStudent(s1, 523, "Sanjayulsha");

```

```
s2 = createStudent(s2, 535, "Cherry");

printStudent(s1);

printStudent(s2);


// size in bytes
printf("Size of Struct student: %lu\n",
      sizeof(struct student));

// size in bytes
printf("Size of Struct pointer: %lu", sizeof(s1));


return 0;
}

/*Output
Student_id : 523
Stud_Name : Sanjayulsha
Name_Length: 11
Allocated_Struct_size: 23


Student_id : 535
Stud_Name : Cherry
Name_Length: 6
Allocated_Struct_size: 18
*/
```