

structures:-

- How to define a structure:-

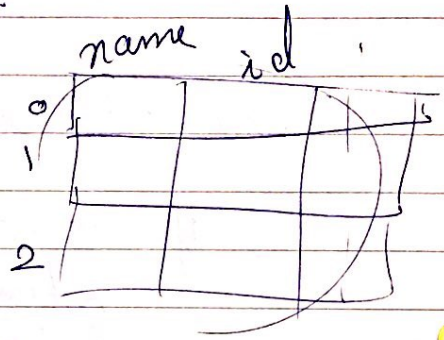
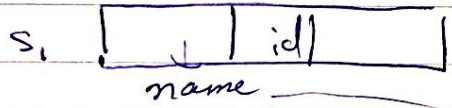
```
typedef struct
```

```
{
```

```
    char name;
```

```
    int id;
```

```
} student_t s1; // Array of 5 struct-t
```



- How to fill a struct:-

```
printf ("Enter name & id\n");
```

```
scanf ("%s%d", s1.name, &s1.id);
```

```
}
```

treat it as a type

- How to pass a structure to a function

```
Prototype: void person_structure (person_t);
```

```
int main ()
```

```
{  
    person_t person_structure (P); // name of structure
```

```
}
```

```
void person_structure (person_t P)
```

```
{  
    printf ("name = %s", P.name, P.id);
```

```
    id = %d
```

```
}
```

Alea Etaini

• How to fill info of structure in a function

```
void full_info (stud_t);
```

```
int main()
{
    stud_t s;
    full_info (s);
}
```

```
void full_info ( student *s1 )
{
    scanf ("%s", (&s1).name );
    scanf ("%d", &(s1).id );
    scanf ("%d", &(s1).number );
}
```

no & sign
string is
You can
replace
them
with

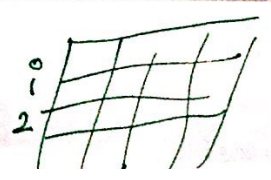
s1 → name
&s1 → id
&s1 → number

• How to put a structure inside another structure

```
typedef struct
{
    char instructor [5];
    int name;
    stud_t students [20];
} course_t;

course_t comp 124;
```

This a structure
That contains
info about a
20 students



عنوان و متغیر و انتزاعی و ساختار و int S struct
functions و عملیات و

Exercise 4 page 34 laboratory WorkBook

```
#define S 100  
typedef struct  
{
```

```
    char name[S];  
    int section;  
    float grade;  
} student_t
```

```
int main ()  
{
```

```
    student_t stud [S], temp;
```

```
    int i, j;  
    for (i=0; i<S; i++)
```

```
        scanf ("%s %d %f", stud[i].name, &stud[i].section,  
                &stud[i].grade);
```

```
    for (i=0; i<S; i++)  
        stud[i].grade += stud[i].grade * 0.05;
```

```
    if (stud[i].grade > 100)  
        stud[i].grade = 100;
```

```
}
```

```
for (i=0; i<S; i++)
```

Ahmed Elawadi

```

if (stud[i].name[0] == 'A')
    Stud[i].grade = 100;

```

```

for (j=0; j<S-1; j++)
    for (i=0; i<S-1; i++)
        if (Stud[i].grade < Stud[i+1].grade)
            temp = Stud[i];
            Stud[i] = Stud[i+1];
            Stud[i+1] = temp;
}
}

```

```

for (i=0; i<S; i++)
    printf("%s \t %d \t %d\n", stud.name[i],
           stud.section[i],
           stud.grade[i]);

```

Notes:-

if (p1 = p2)

↑
structures : you can't do that

function of type of the structure it self.

```

Stud_t get_person ( );
p1 = get_person ( );

```

```

Stud_t get_person ( );
person_t new_p;
End

```

```

return new_p; } main

```

MaaTain

Notes about :-

structure

How to get out a function from a function

- Define a function of Type of your structure And makes it like this:-

for Ex:-

```
stud_t get_p ( )
```

```
stud_t p;
```

```
p = get_p ( );
```

```
stud_t get_p ( )
```

```
stud_t new_p;
```

```
printf ("Enter info ");
```

```
scanf ("%s %d", &new_p.s, &new_p.id);
```

```
return new_p;
```

```
}
```

Alex Etaiwi