

Structs

Structures are used to hold data that **belong** together.


Examples:

- **Student record**: student ID, name, major, gender, start year
- **Address book contact**: name, address number

Declaration

Structs are defined outside the main function.

```
struct StudentRecord
{
    int id;
    int age;
    char gender;
    double gpa;
    StudentRecord * emergContact
};
```



After declaring, variables can be created of the struct type.

- StudentRecord student1 student2;

Member Access

- student1.name

```
strcpy(student1.name, "John Doe");  
student1.id = 123;  
student1.gender = 'M';  
switch(student1.gender) {  
    case 'M': cout << "Mr. "; break;  
    etc etc
```

Can set struct members equal to each other.

Structs are similar to classes, and always public.

Structs Can Have

- Member variables
- Methods (Functions)
- Constructors, Destructors, etc
- public, private, and protected attributes
- virtual functions

Methods / Constructors

No return types.

```
struct BankAccount {  
    int nm;  
    char name[10];  
    BA(int n, char name2[]);  
}
```

```
BA::BA(int, char [])  
{  
    nm = n;  
    strcpy(name, name2);  
}
```