Structure

- A structure is a user-defined data type that groups related variables (of different types) into a single unit. It allows you to represent a complex data type more easily.

Struct

```
struct Person {
    char name[50];
    int age;
    float height;
};
```

- struct keyword defines the structure.
- Person is the name of the structure.
- name, age, and height are fields within the structure.

Creating and Initializing Structure Variables

Declaration and Initialization

```
struct Person person1;                  // Declaration
struct Person person2 = {"Alice", 30, 5.5}; // Initialization
```

Alternatively

```
person1.age = 25;
strcpy(person1.name, "Bob");
person1.height = 5.8;
```

Accessing

```
printf("Name: %s\n", person1.name);
printf("Age: %d\n", person1.age);
printf("Height: %.1f\n", person1.height);
```

Creating and Initializing Structure pointer Variables

Declaration and Initialization

```
struct Person *ptr = &person1;
// Declaration Pointer to structure
// Accessing fields through pointer
printf("Name: %s\n", ptr->name);
printf("Age: %d\n", ptr->age);
printf("Height: %.1f\n", ptr->height);
```