

WHAT IS A UNION?

- Union is a user defined data type (very similar to structures)
- The difference between structures and unions lies in the fact that in **structure**, each member has its own storage location, whereas members of a **union** uses a single shared memory location.
- This single shared memory location is equal to the size of its largest data member.

union

```

struct Active Employee {
    char Prog[3+]; // 34
    char Sweeper[3+]; // 34
};
        
```

68

union

```

struct Employee {
    int id; // 4 bytes
    char name[3+] // 3+ bytes
};
        
```

Handwritten notes: mid night 3st, day 2st, Night 2st, id = 32, name "Harry", 38.

DECLARING AND ACCESSING UNION MEMBERS

- Like structures, we access any member by using the member access operator (.) in unions.
- We use keyword union to define a union.
- Syntax is very similar to that of structure.

struct ⇒ Union

e1.id = 27;

↑

member

UNION CANNOT HANDLE ALL MEMBERS AT ONCE

The diagram is divided into two main sections: Structures and Unions.

Structures: A box labeled 'struct student' contains the code: `float marks //4 bytes` and `int id; //4 bytes`. Handwritten red notes show 'marks' with a bracket indicating '4 bytes' and 'id' with a bracket indicating '4 bytes'. Below the code, a box labeled 's1' has an arrow pointing to it with the text '8 bytes of data'.

Unions: A box labeled 'union student' contains the code: `float marks //4 bytes` and `int id; //4 bytes`. Handwritten red notes show 'marks' with a bracket indicating '4 bytes' and 'id' with a bracket indicating '4 bytes'. Below the code, a box labeled 's1' has an arrow pointing to it with the text '4 bytes of data - Shared between id and marks'.

At the bottom of the slide, there is a VLC media player interface showing the video title 'Unions In C-C Tutorial In Hindi #39.mp4' and a progress bar.

SYNTAX FOR UNIONS IS VERY SIMILAR TO STRUCTURES

```
union test {  
    int a;  
    float b;  
    char c;  
}un;  
un.a; //for accessing members of union un  
un.b;  
un.c;
```

Handwritten red notes on the code include: 'Question?' above the opening brace, 'Quick Quiz' and 'Comment?' to the right, and 'structure' with a red dot below the closing brace.

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