

Problem Solving With C - UE24CS151B

Unions in C

Prof. Sindhu R Pai

PSWC Theory Anchor, Feb-May, 2025 Department of Computer Science and Engineering

Unions in C

PES UNIVERSITY

- What is Union?
- Accessing Union Members
- Union vs Structure

Unions in C

PES UNIVERSITY

What is Union?

- A user defined data type which may hold members of different sizes and types
- Allow data members which are mutually exclusive to share the same memory
- Unions provide an efficient way of using the same memory location for multiple-purpose
 - At a given point in time, only one can exist
- The memory occupied will be large enough to hold the largest member of the union
 - The size of a union is the size of the biggest component
- All the fields overlap and they have the same offset: 0.
- Used while coding embedded devices

Unions in C



Accessing the Union members

Syntax:

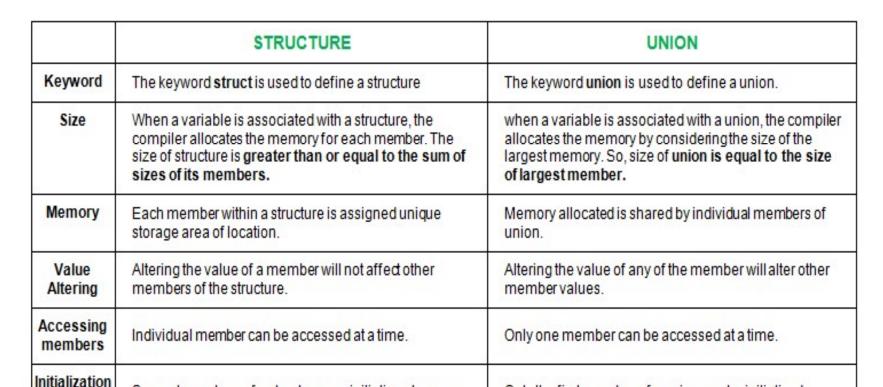
```
union Tag  // union keyword is used
{
data_type member1;  data_type member2;  ... data_type member n;
};  // ; is compulsory
```

- To access any member using the variable of union type,
 - use the Member Access operator (.)
- To access any member using the variable of pointer to union type,
 - use the Arrow operator (->)
- Coding Examples

Unions in C

of Members

Union Vs Structure



Only the first member of a union can be initialized.

Several members of a structure can initialize at once.





THANK YOU

Department of Computer Science and Engineering

Dr. Shylaja S S, Director, CCBD & CDSAML, PESU Prof. Sindhu R Pai - sindhurpai@pes.edu Dr. Jeny Jijo, CSE, PESU