PROBLEM SOLVING WITH C
UE23CS151B

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Arrays and Functions

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Arrays and Functions

1. Passing an Array to a function
2. Array as a Formal parameter and actual parameter
3. Pointer as a Formal parameter and Array as an Actual parameter
4. Passing individual array element to a function

Passing an Array to a function

- When array is passed as an argument to a function, arguments are copied to parameters of the function and parameters are always pointers.
- Array degenerates to a pointer at runtime.
- All the operations that are valid for pointer will be applicable for array too in the body of the function.
- Function call happens always at run time.

Array as a formal parameter and Actual parameter

- **Array being formal parameter** - Indicated using empty brackets in the parameter list.

  void myfun(int a[],int size);

- **Array being actual parameter** – Indicated using the name of the array

  Array a is declared as int a[5];

  Then myfun is called as myfun(a,n);

- Coding example to read and display the array elements

Pointer as a formal parameter and Array as an Actual parameter

- **Pointer being formal parameter** - Indicated using empty brackets in the parameter list.

  void myfun(int *a,int size);

- **Array being actual parameter** – Indicated using the name of the array

  Array a is declared as int a[5];

  Then myfun is called as myfun(a,n);

- Coding example to read and display the array elements

Passing individual Array elements to a function

- Indexed variables can be arguments to functions
- Program contains these declarations: int a[10]; int i; void myfunc(int n);
- Variables a[0] through a[9] are of type int, making below calls is legal

```
myfunc(a[0]);
myfunc(a[3]);
myfunc(a[i]);                    // i is between 0 and 9
```

THANK YOU

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