CA IV th (Sem) 15/04/2020 Ritu.

# "POINTERS"

A pointer is a derived data type that refers to another data variable by storing the variable's memory address rather than data.

A pointer variable defines where to get the value of a specific data variable instead of defining actual data.

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→ Used to change variables inside a function (reference parameters)

→ Used to remember a particular member of a group (such as an array)

→ Used in dynamic (on-the-fly) memory allocation (especially of arrays)

→ Used in building complex data structures (linked lists, stacks, queues, trees, etc)

# Declaring and Initializing pointers

We declare a pointer variable similar to other variable in c++. The declaration is based on the data type of the variable it points to. the declaration of a pointer variable takes the following form

```
data-type * pointer-variable;
```

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```

pointer-variable is the name of the pointer and the data-type refers to one of the valid C++ data types such as int, char, float, etc.

The data-type is followed by an asterisk (*) symbol, which distinguishes a pointer variable from other variables to the compiler.

```
int *ptr;
```