Agenda

- Pointer
- this pointer
- Types of Member Functions
- Array(1D & 2D)
- Constant
- Mutable

Pointer (demo01)

this pointer (demo02)

- this pointer is a pointer that is passed internally to all the non static functions of the class.
- It is a constant pointer.
- It will store the address of current calling object
- It is recommended to use this pointer while accessing the data members of the class inside the class

Member Functions (demo03)

- All the funtions that we write inside the class are called as member functions
- 1. Constructor
- 2. Destructor
- 3. Mutators
- 4. Inspectors
- 5. Facilitators

Constructor (demo04 to demo06)

- It is a special member function of the class.
- why is special ?
  - It has same name as that of the class
  - It does not have return type
  - It gets automatically called when obejct is created.
- ctor gets called only once in the lifecyle of an object.
- ctor gets called for every new object that is created.
- Types of Constructor
  - 1. Default/Parameterless ctor
  - 2. Paramaterized ctor
  - 3. Copy Ctor
    - we will learn this after dynamic memory allocation

Destructor (demo07)

- It is a special member function of the class.
- why is special ?
    - It has same name as that of the class with tild(~) sign
    - It doePointers not have return type
    - It gets automatically called when obejct goes out of scope.
- ctor gets called for every object that goes out of scope.
- Dtor calling sequence is exactly opposite to that of ctor calling sequence

Mutators (demo08)

- These are the member functions of the class that are responsible to mutate/change the value of a single data member of the class.
- Mutators are also called as Setters
- when we are defining a mutator, its industry practice to start the name of the mutator with set followed by the name of the data member to change.

Inspectors (demo09)

- These are member functins of class which are responsible to provide the value of data members outside the class.
- Inspectors are also called as Getters.
- when we are defining a inspector, its industry practice to start the name of the inspector with get followed by the name of the data member to read.

Array (demo10 to demo13)

Constant (demo14)

Constant Data member (demo15)

- we can make the data member as constant.
- constant data memebrs must be initialized.
- we cannot initialize it inside ctor body.
- we need to initialize it inside ctor members initializer list
- constant datamemebrs once initialized we cannot change its value.

constant member Functions

- we can make the member fucntions as constant.

- we cannot change value of const as well as non constant data memebers inside constant member functions
- If we want to change the value of non constant data member inside constant member functions then make that non constant data member as mutable

constant objects (demo18)

- on constant objects we cannot call non constant member functions.
- we can only call constant member functions.