14.1 Static members and instance.

Class members that are declare Using static keyword.

↳ Only one copy of that member is Created for entire class. and is Shared by all objects of that Class.

↳ It is initialize before any object is Created.

It Visible only within the Class, but life time is the entire Program.

Sentex:

Static data data-type member name;

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It is Posible to Create a memberfunction or member variable which does not belong to any class

- There is only one copy of Static variable in a memory.

Static member function

Static Retur Type Functionname (Parameter list)

14.2 Noted Friend Class

Const member function in C++.

For Object An object declared as Const Cannot modified and hence, can invoke only Const member functions as these functions ensure not to modify the object.

Sentex.

Const Class_name object name.

For function:

When we write Const with any momber function of class then the value in the function will not changed

Syntex:

Return_type fun-name. Const;

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Constructors Overloading

It is a function that is automatically called ~~when~~ in main.

- Having no return type.
- Name same as class name.

Using member initialization Lists

Constructor also use to store the initial value of private function

```
Rectangle::Rectangle()
{ width = 0.0;
  length = 0.0;
}
```

In-place member Initialization

You could not initialize member Variable in its declaration statement.

Class ka Private:
    double width = 0.0;
    double length = 0.0;
Public:
    Pubic member function Appear Here
};

Scanned with CamScanner

Variable.

→ It is declare globaly.

This Pointer:

→ This is a pointer that holds the address of an object.

→ It is use to return the object from the function.

→ If we want to use dot instead of (→) Arrow ths we mused deqrence the object like (*This).x.

→ It is also use for copy the object.

→ object can also delede by using this keyword

```
Void destroy()
{ delete this; }
```

→ From this pointer you can delete

the object only when it is heap When we use object that is on heap this object can be deleted.

Why We Use:

- When we need to return an object from the function
- When we store address of an object.

object.

Using Smart Pointer to allocate

↱ We can use unique-ptr to dinamically allocate memory and not worry about deleting memory. when you finished Using it.

↱ A Unique ptr automatically deletes a chunk of dinamically allocated memory. when memory is no longer useing it.

↱ This Prevents memory leaks for occuring

```
#include <memory> // header file.
Unique_ptr <Rectangle> rectangle (new Rectangle);
```