

CA - IVth sem.

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Rity

this pointer
→ → → →

- this is a keyword.
- this is a local object pointer in every instance member function containing address of the caller object.
- this pointer can not be modify.
- It is used to refer caller object in member function.

- for example.

The function call `A.max()` will set the pointer `this` to the address of object `A`. The starting address is the same as the address of the first variable in the class structure.

- this pointer is automatically passed to a member function when it is called. The pointer `this` acts as an implicit argument to all member functions.


```
class ABC
```

```
{
```

```
    int a;
```

```
};
```

The private variable 'a' can be used directly inside a member function like `a = 20;`

We can also use it as `this->a = 20;`

- ∇ this pointer is explicitly used when overloading the operators using member function.
- When a binary operator is overloaded using a member function, we pass only one argument to the function. The other argument is implicitly passed using the pointer `this`.
- Important use of the pointer 'this' is to return the object it points.

PROGRAM

Here this pointer
contain address of
caller object

```
#include <iostream.h>
#include <conio.h>
```

```
class Box
```

```
{
```

```
private:
```

```
int l, b, h;
```

```
public:
```

```
void setDimension (int l, int b, int h)
```

```
{
```

this represent
caller object

```
this->l = l; this->b = b; this->h = h;
```

```
}
```

```
void showDimension ()
```

```
{
```

```
cout << "l = " << l << " b = "
```

```
cout << "\n l = " << l << " b = " << b << " h = " << h
```

```
}
```

```
};
```

```
void main ()
```

```
{
```

```
clrscr ();
```

```
Box smallBox;
```

caller object
of
showDimension

```
smallBox.setDimension (12, 10, 5);
```

```
smallBox.showDimension ();
```

```
getch ();
```

```
};
```