



FACULTY OF ENGINEERING & TECHNOLOGY

CSPS103: Object Oriented Programming

Lecture-17

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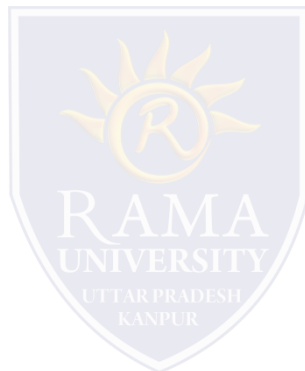
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OBJECTIVES

In this lecture, you will learn to:

- ❖ this Pointer
- ❖ Usage of this keyword
- ❖ Example this Pointer



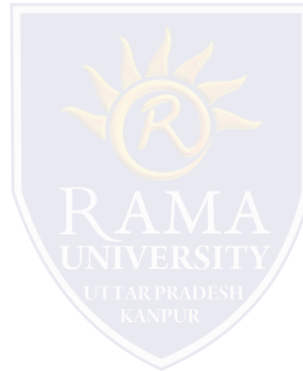
What is this Pointer

- ☐ 'this' is a C++ keyword.
- ☐ 'this' always refers to an object that has called the member function currently.
- ☐ We can say that 'this' is a pointer.
- ☐ It points to the object that has called this function this time.
- ☐ While overloading binary operators, we use two objects, one that called the operator function and the other, which is passed to the function.
- ☐ We referred to the data member of the calling object, without any prefix.
- ☐ However, the data member of the other object had a prefix.
- ☐ Always 'this' refers to the calling object place of the object name.

USAGE OF THIS KEYWORD

There can be 3 main usage of this keyword in C++:

- 1) It can be used to pass current object as a parameter to another method.
- 2) It can be used to refer current class instance variable.
- 3) It can be used to declare indexers.



EXAMPLE THIS POINTER

```
#include <iostream.h>
class Employee {
public:
    int id; //data member (also instance variable)
    string name; //data member(also instance variable)
    float salary;
    Employee(int id, string name, float salary)
    {
        this->id = id;
        this->name = name;
        this->salary = salary;
    }
    void display()
    {
        cout<<id<<" "<<name<<" "<<salary<<endl;
    }
};

int main(void) {
    Employee e1 =Employee(101, "Sonoo", 890000); //creating an object of Employee
    Employee e2=Employee(102, "Nakul", 59000); //creating an object of Employee
    e1.display();
    e2.display();
    return 0;
}
```



REFERENCES

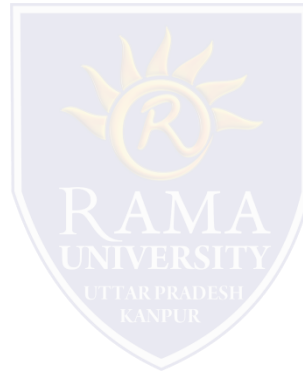
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MULTIPLE CHOICE QUESTION

Multiple Choice Question:

Q1. Which is the pointer which denotes the object calling the member function?

- a) Variable pointer
- b) This pointer
- c) Null pointer
- d) Zero pointer

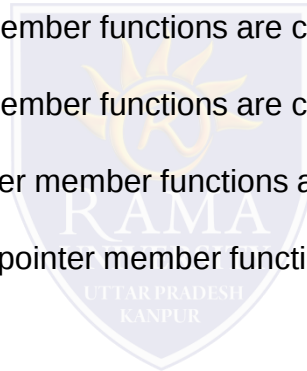


MULTIPLE CHOICE QUESTION

Multiple Choice Question:

Q2. Which among the following is true?

- a) this pointer is passed implicitly when member functions are called
- b) this pointer is passed explicitly when member functions are called
- c) this pointer is passed with help of pointer member functions are called
- d) this pointer is passed with help of void pointer member functions are called



MULTIPLE CHOICE QUESTION

Multiple Choice Question:

Q3. The this pointer is accessible _____

- a) Within all the member functions of the class
- b) Only within functions returning void
- c) Only within non-static functions
- d) Within the member functions with zero arguments

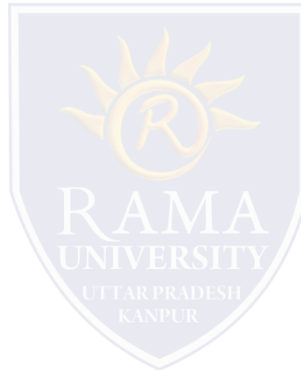


MULTIPLE CHOICE QUESTION

Multiple Choice Question:

Q4. An object's this pointer _____

- a) Isn't part of class
- b) Isn't part of program
- c) Isn't part of compiler
- d) Isn't part of object itself

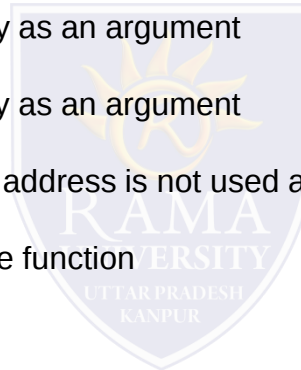


MULTIPLE CHOICE QUESTION

Multiple Choice Question:

Q5. Whenever non-static member functions are called _____

- a) Address of the object is passed implicitly as an argument
- b) Address of the object is passed explicitly as an argument
- c) Address is specified globally so that the address is not used again
- d) Address is specified as return type of the function



Summary

In this lecture, you learned that:

- **this** is a keyword that refers to the current instance of the class

