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Introduction - Part II

Comprehensive Course On C++

Pankaj Sharma • Lesson 2 • May 13, 2024

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CS & IT Engineering

C++ Programming

Introduction-II

Lecture Number- 02

By- Pankaj Sir

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Topics

to be covered

1. Introduction

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What are the properties we are interested in Teacher

Name

Age

Quali.

MaritalStatus

Mamaji X

Fooja ji X

GF X

= X

= X

x

method/actions

playing() X

Eating() X

running() X

walking() X

Teaching() ✓

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```
playing() {

}

sleeping {

}
```

C language

```
playing()
sleeping()
running()
walking()
eating()
```

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C++

Pankaj.teaching()

Ram.running()

shyam.playing()

C language

playing()

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Person

Teacher

properties

Age

weight

height

Name

Ram. playing()

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student

Name

Age

Roll

Address

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Patient

- Amar.age
- Amar.bloadgroup
- Amar.BP_high
- Amar.BP_low
- Amar.sugarlevel

variable / properties for data

- Amar.diagnosys()

Amar.BP_low = 85;

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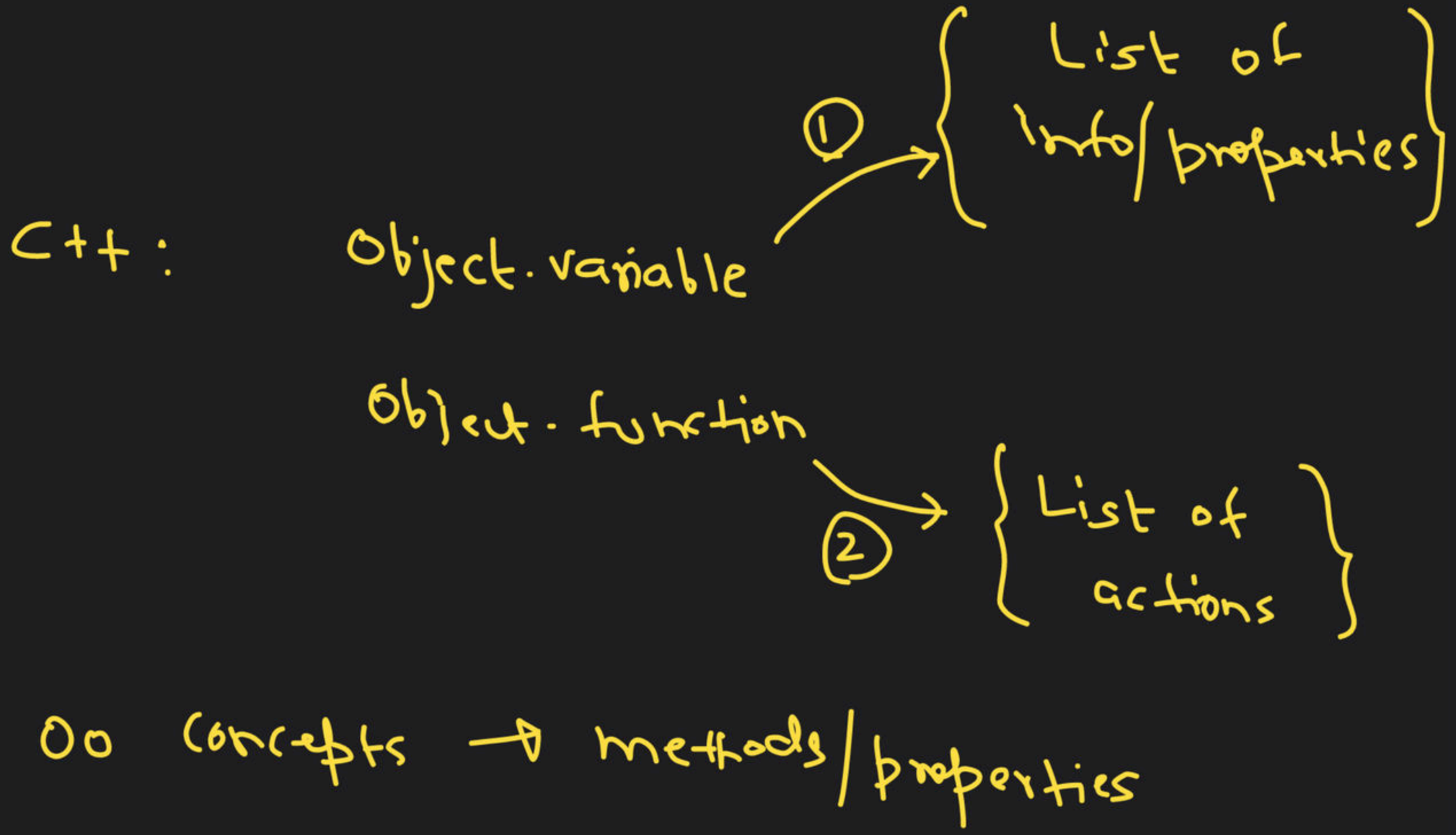
C++ :
Object.variable
①
List of info/properties
Object.function
②
List of actions
OO concepts → methods/properties

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Person

props:

- height
- weight
- age
- Name

methods/actions

- playing()
- sleeping()
- Eating()
- running

Ram.playing()

Ram.running()

→ Ram.height

→ Ram.weight

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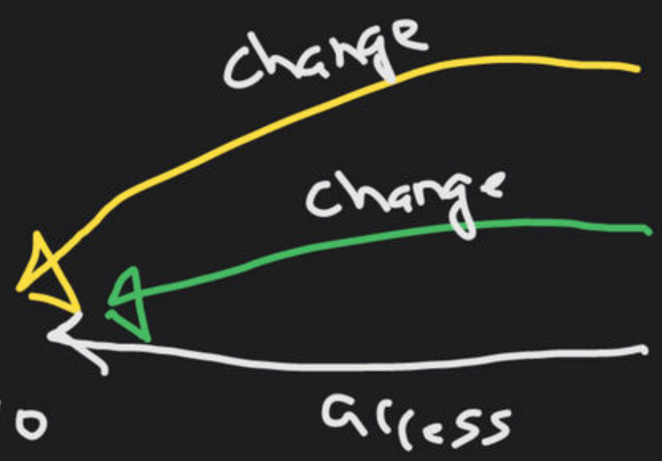
Bank

1) Account_No
2) Name
3) Age
4) Balance
5) Phone_No



1) Account_open()
2) withdrawl()
3) Deposit()
4) Balance Inquiry
5) Update

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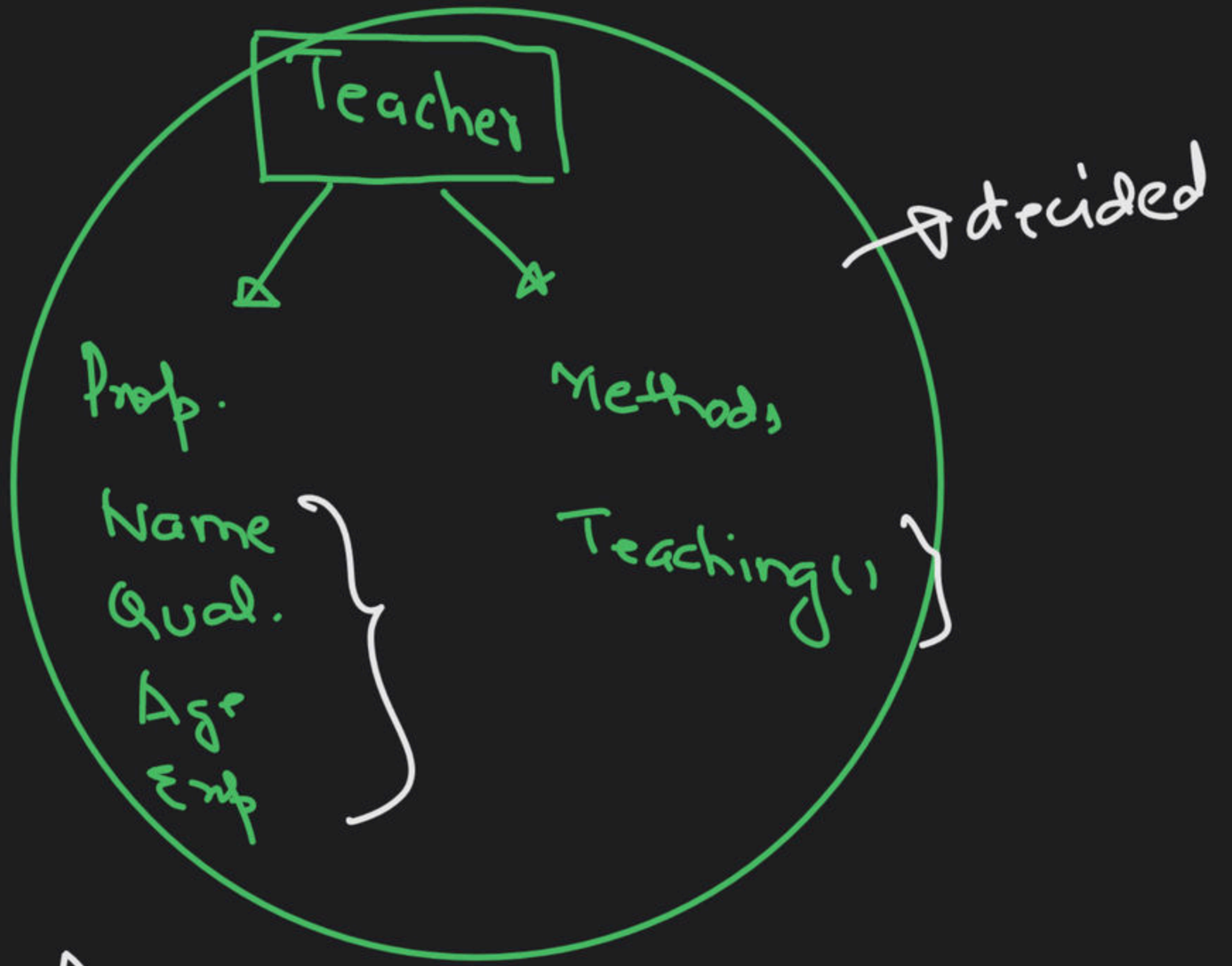

① Pankaj.Name
Pankaj.Qual
Pankaj.Age
Pankaj.Exp

② Rahul.Name
Rahul.Qual
Rahul.Age
Rahul.Exp

③ Ankit.Name
Ankit.Qual
Ankit.Age
Ankit.Exp

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① Class contains description of an object.

C++ object — behaviour
C++ object — state (prop.)

Ram.Age = 41

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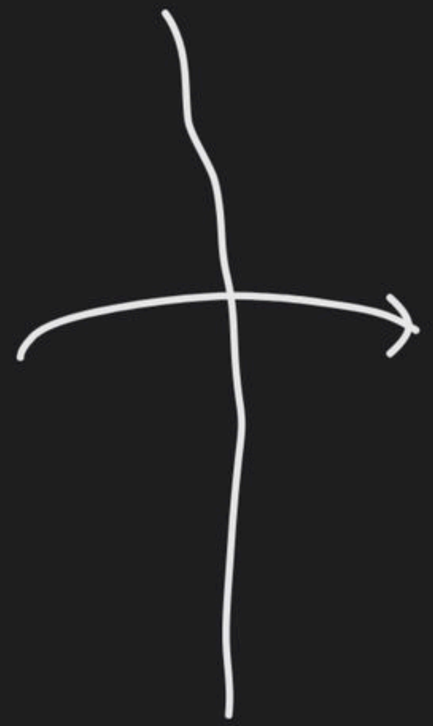
Ram.high_bp = diagnosis()

running() {

}



sleeping() {

}

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Pankaj.c

```
#include<stdio.h>
 void main(){
  int n,ans;
printf("Enter a number");
scanf("%d",&n);
  ans = n*n;
pf("The square of %d is %d",n,ans);
                }
```

C++ is a superset of C

C++ → procedure (function)

→ OO (object, class)

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Pankaj.cpp

```
#include<stdio.h>
void main(){
int n,ans;
printf("Enter a number");
scanf("%d",&n);
ans = n*n;
pf("The square of %d is %d",n,ans);
}
```

Procedure oriented ✓

C++

Procedure

Object oriented ✓

let us try

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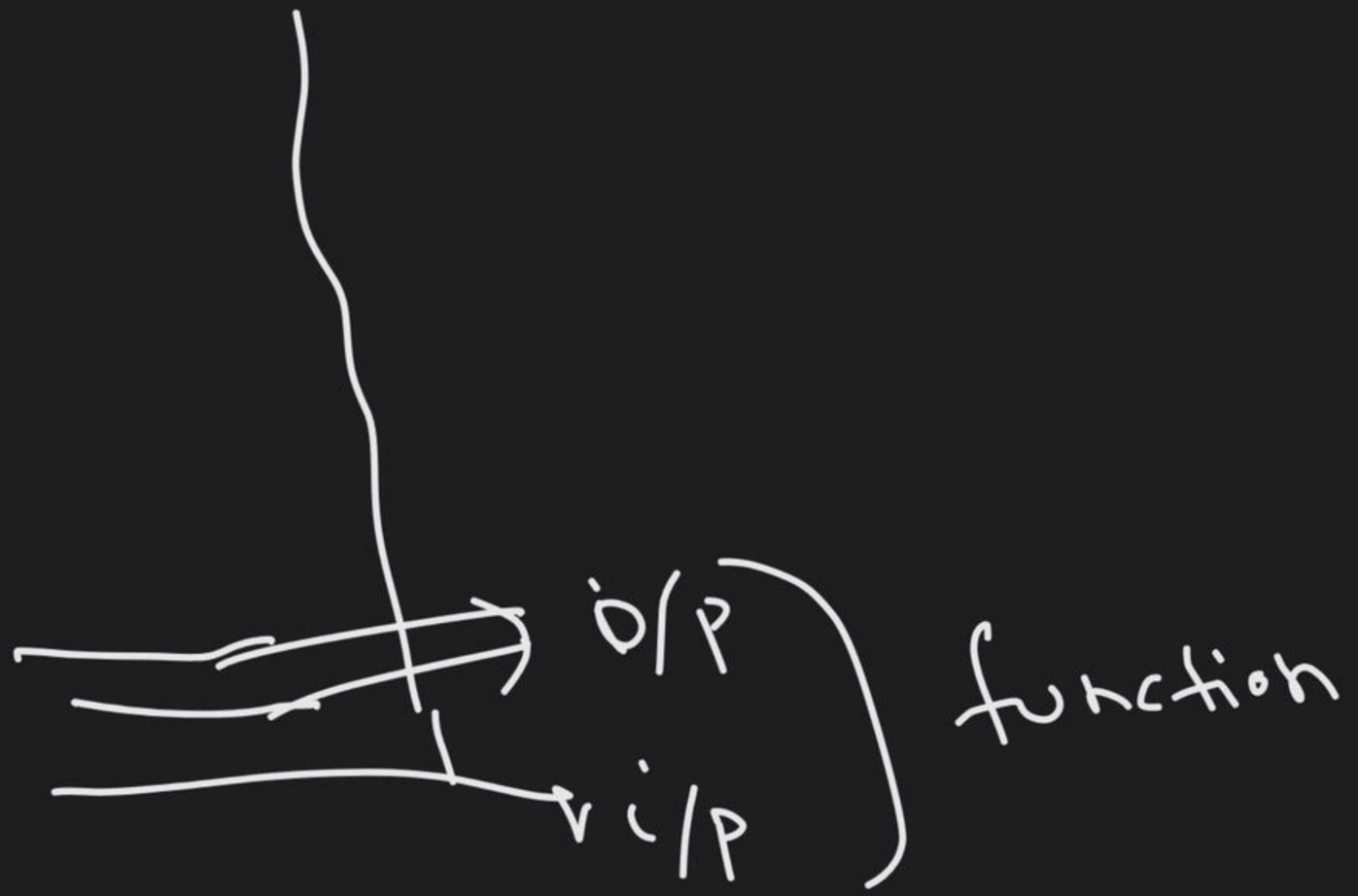
C

running()

playing()

printf()

scanf()



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Procedure Oriented

C ⟶ printf( ) ⟶ predefined function

C++ ⟶ cout ⟶ predefined Object

<< : operator (Insertion operator)

```
printf("welcome");
cout<<"welcome";
```

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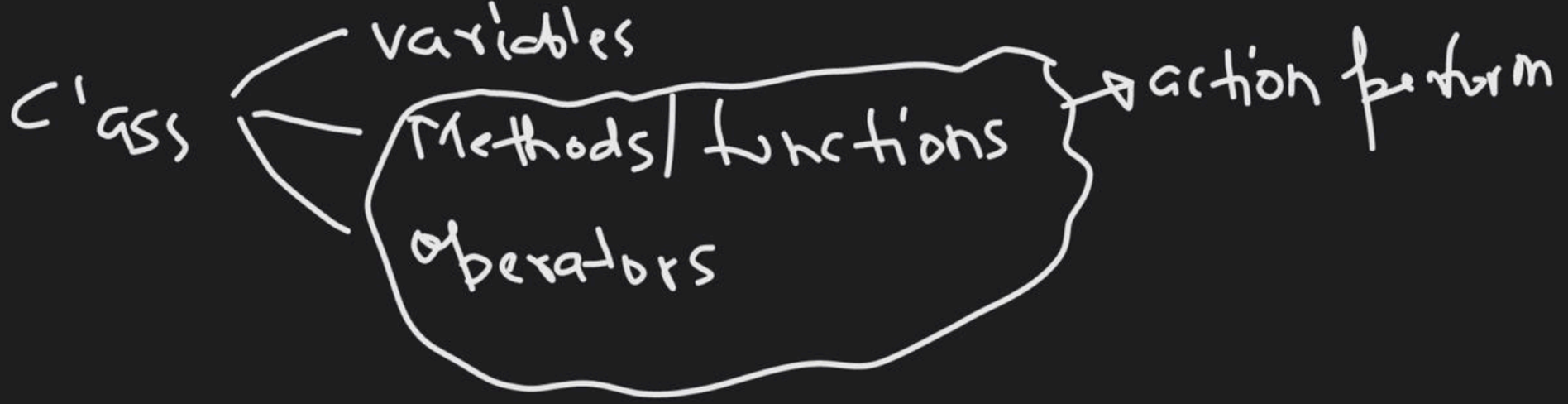

object.var

object.function

Operator overloading

Object operator operand

cout << "welcome" ;

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printf("Enter a number"); ⇒ cout<<"Enter a number";

printf("The square of %d is %d", n, ans);

"The square of" — string; %d — var; "is" — string; ans — var.

⇒ cout<<"The square of"<<n<<"is"<<ans;

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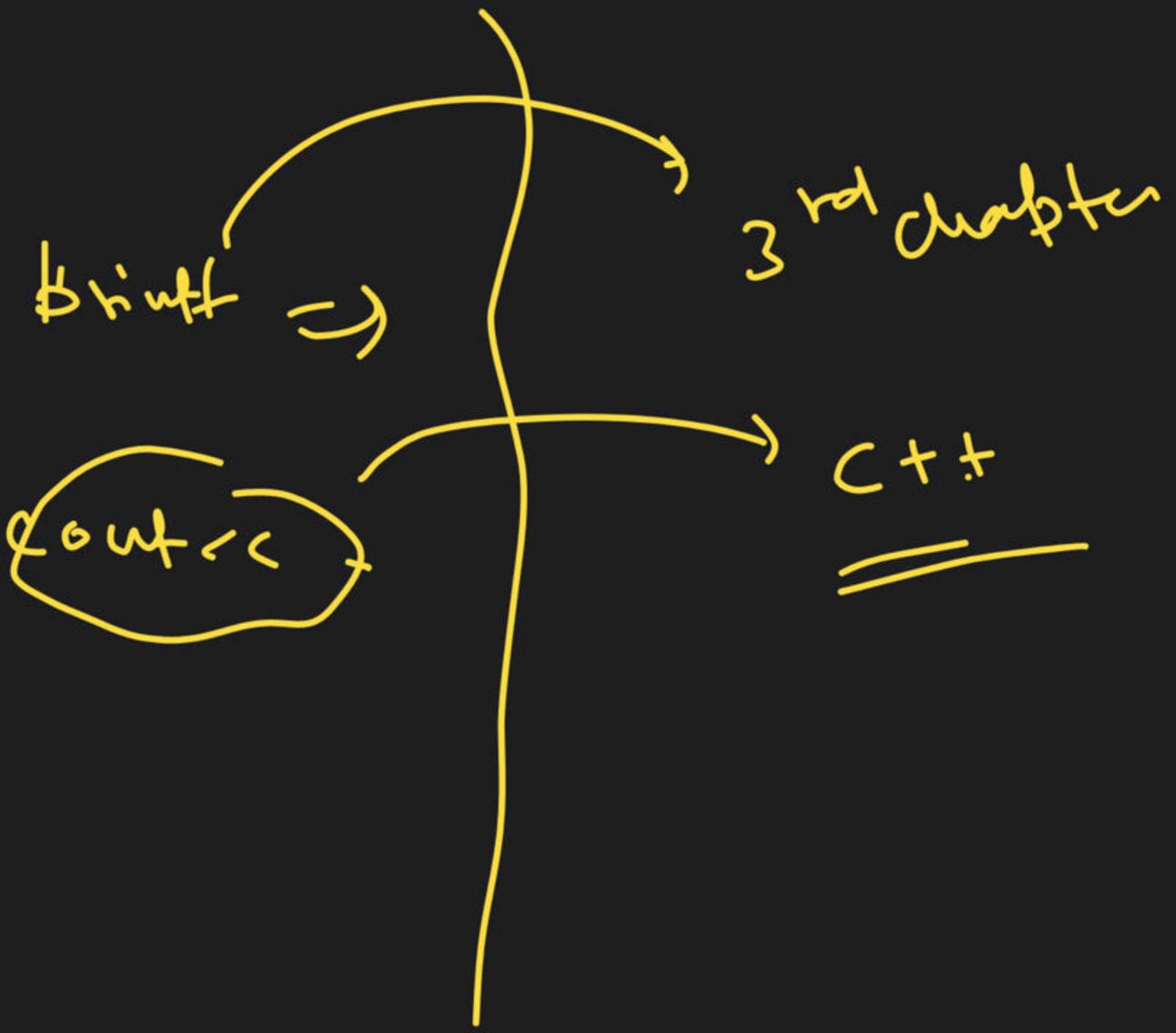
strike



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Input

scanf → predefined function

cin → predefined object

>> : → Extraction operator

scanf("%d", &n) ⇒ cin>>n;

scanf("%d %d", &a, &b) ⇒ cin>>a>>b;

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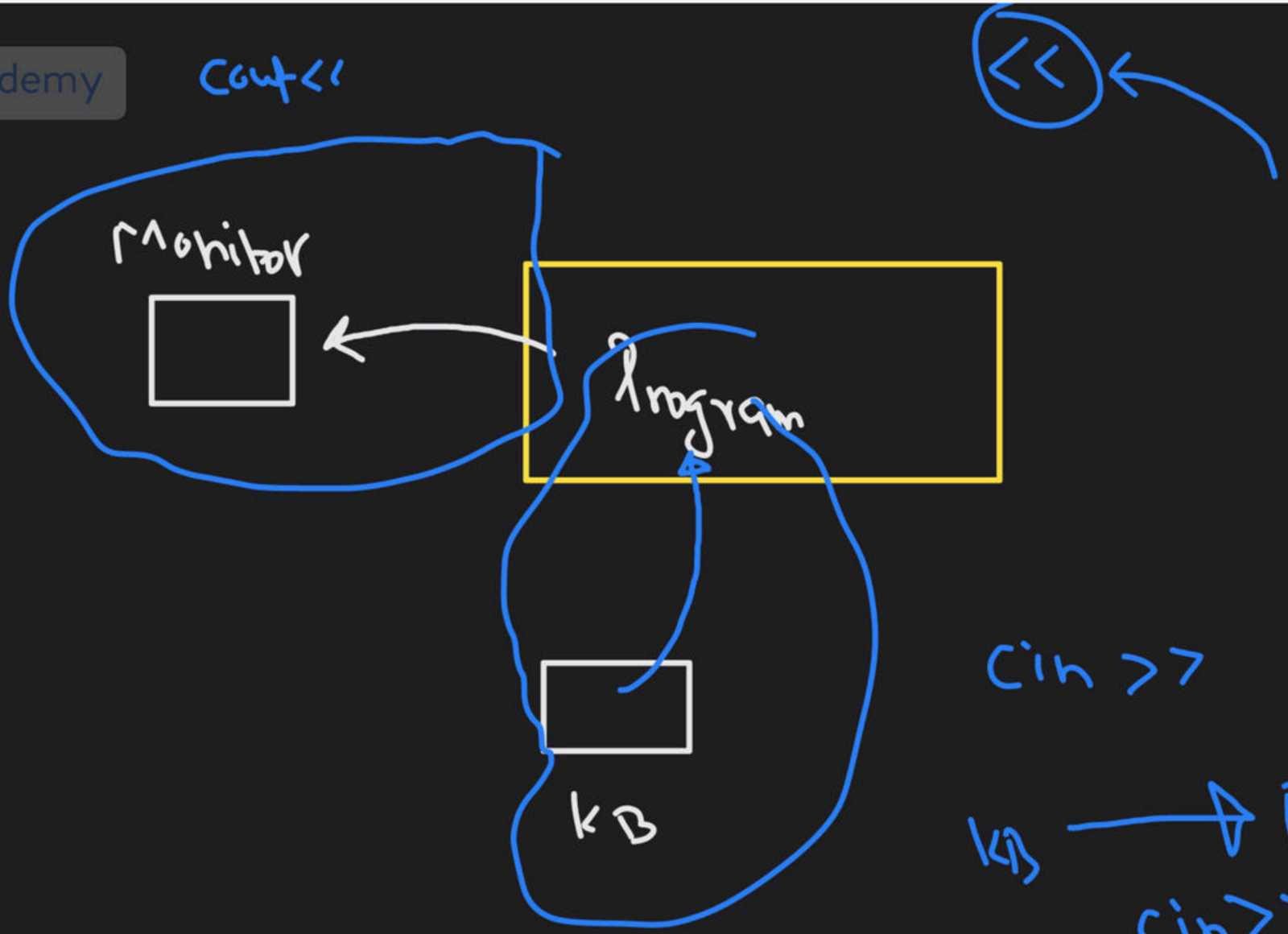
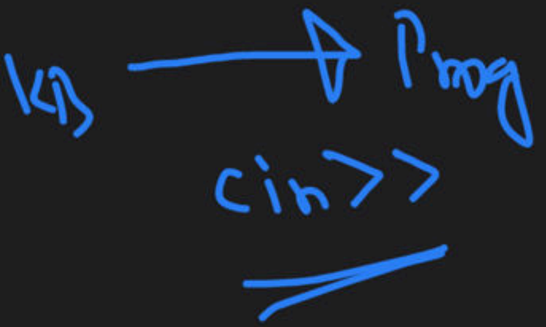
cout<<



cin >>



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C ⇐

```
#include<stdio.h>

void main(){

    int n,ans;

pf("Enter a no");

sf(".|.d",&n);

ans = n*n;

pf("The square of .|.d is .|.d",n,ans);

}
```

Ab bhi Error Ayega → ?

→ Next class

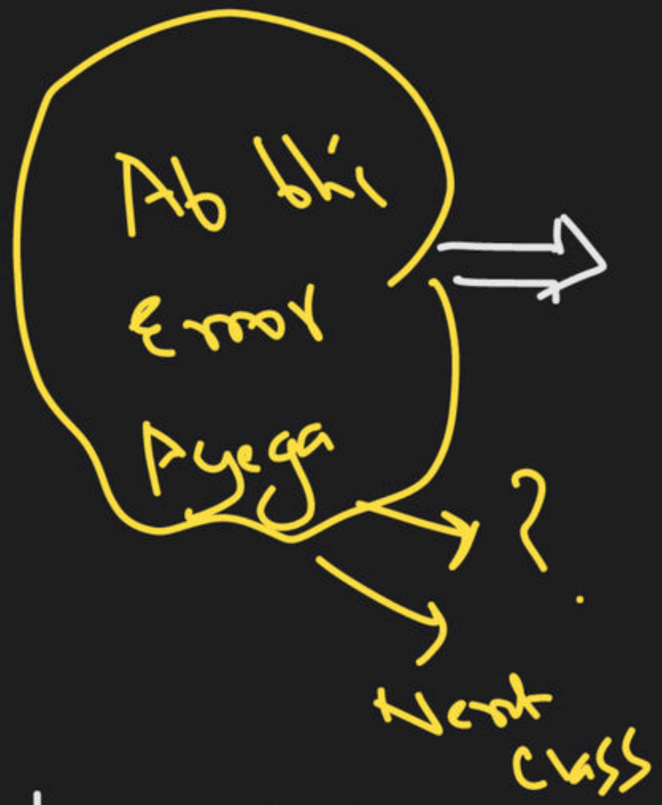
Error

```
#include<iostream>
#include<conio.h>
int main(){

    int n,ans;

    cout<<"Enter a no.";

    cin>>n;

    ans = n*n;

    cout<<"The square of"<<n<<"is"
                    <<ans;

    getch();

}
```

[cin, cout] bxdef. object

.h ✗

.h ✓



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THANK YOU!

Here's to a cracking journey ahead!