

CS & IT ENGINEERING

Data Structures

Introduction to Data Structures


Lec- 02



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TOPICS TO BE
COVERED



Introduction-2

variable :

$$y = 3x$$

$$x = 1$$

$$y = 3$$

$$x = 2$$

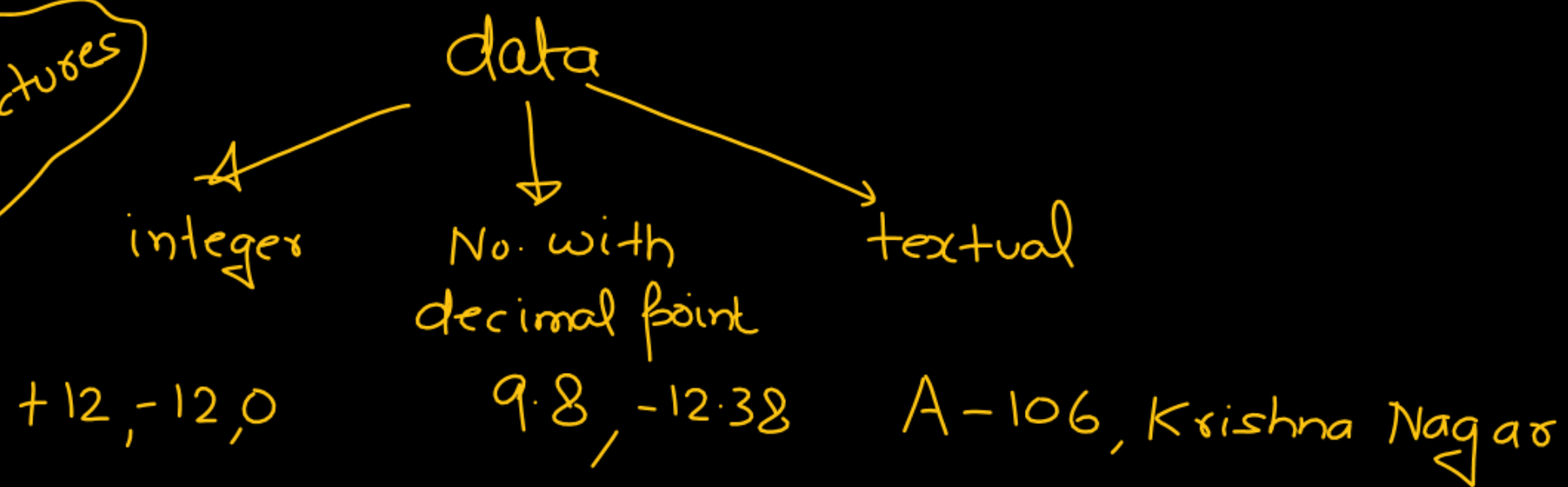
$$y = 6$$

$$x = 3$$

$$y = 9$$



C-recorded
videos
Notice → Previous lectures



data types

- (i) Integer :
- (ii) floating point :
- (iii) character

int Age ;

→ +ve, -ve

Info

Age = 12 ;

← int Age ;

int Age ;

Age ←

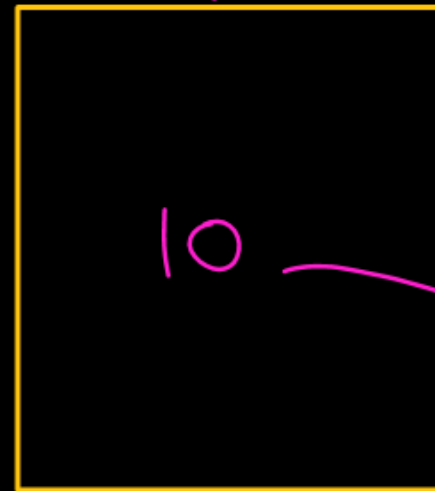
9896989

_____ ;

int Age = 10;

Label/Identifier
←

Age



value

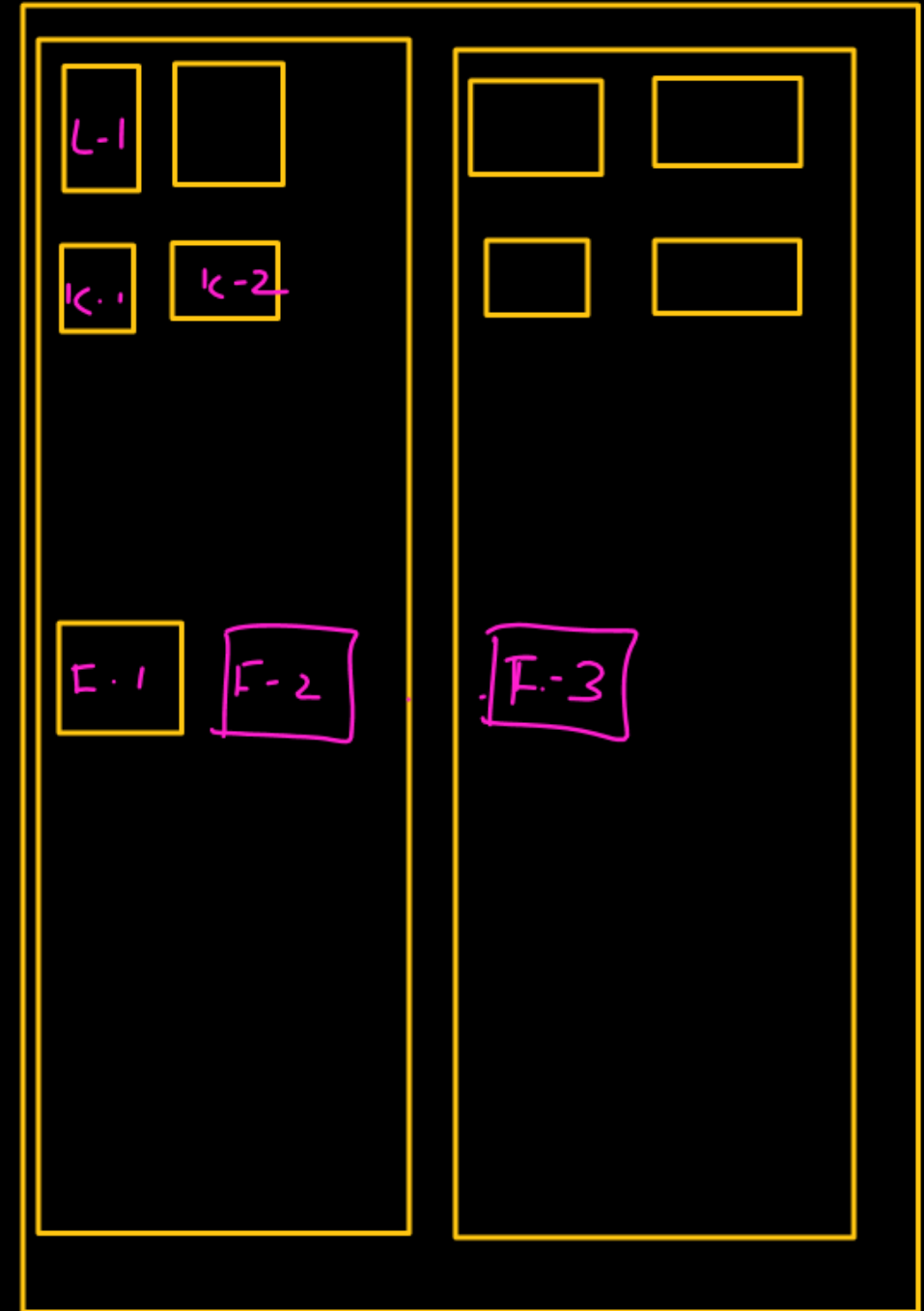
Address
← 2016

1012	Age	
	10	
	2016	

3:00-6:00PM

Ticket

F-3




```
#include <stdio.h>
```

```
void main(){
```

```
    int Age = 10;
```

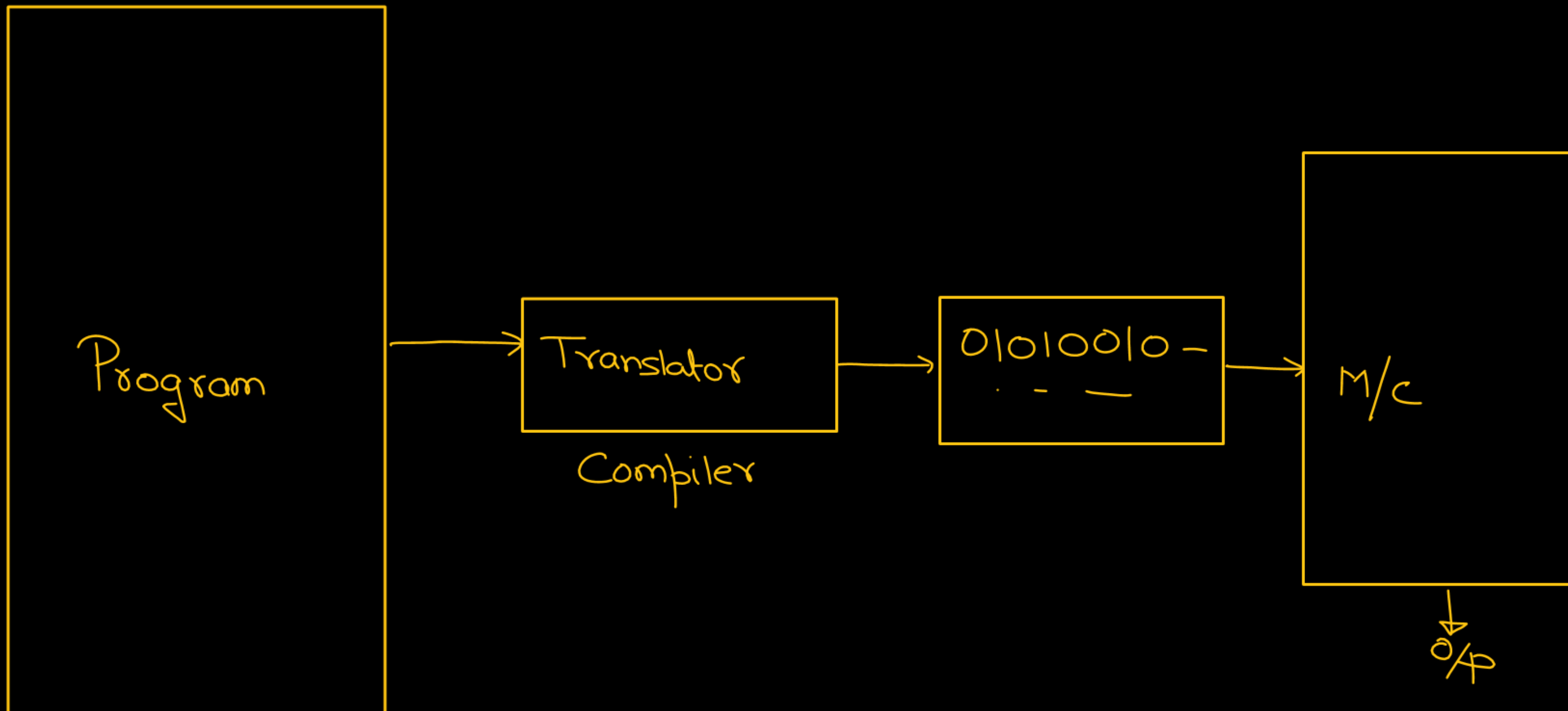
```
    //
```

```
}
```

English type

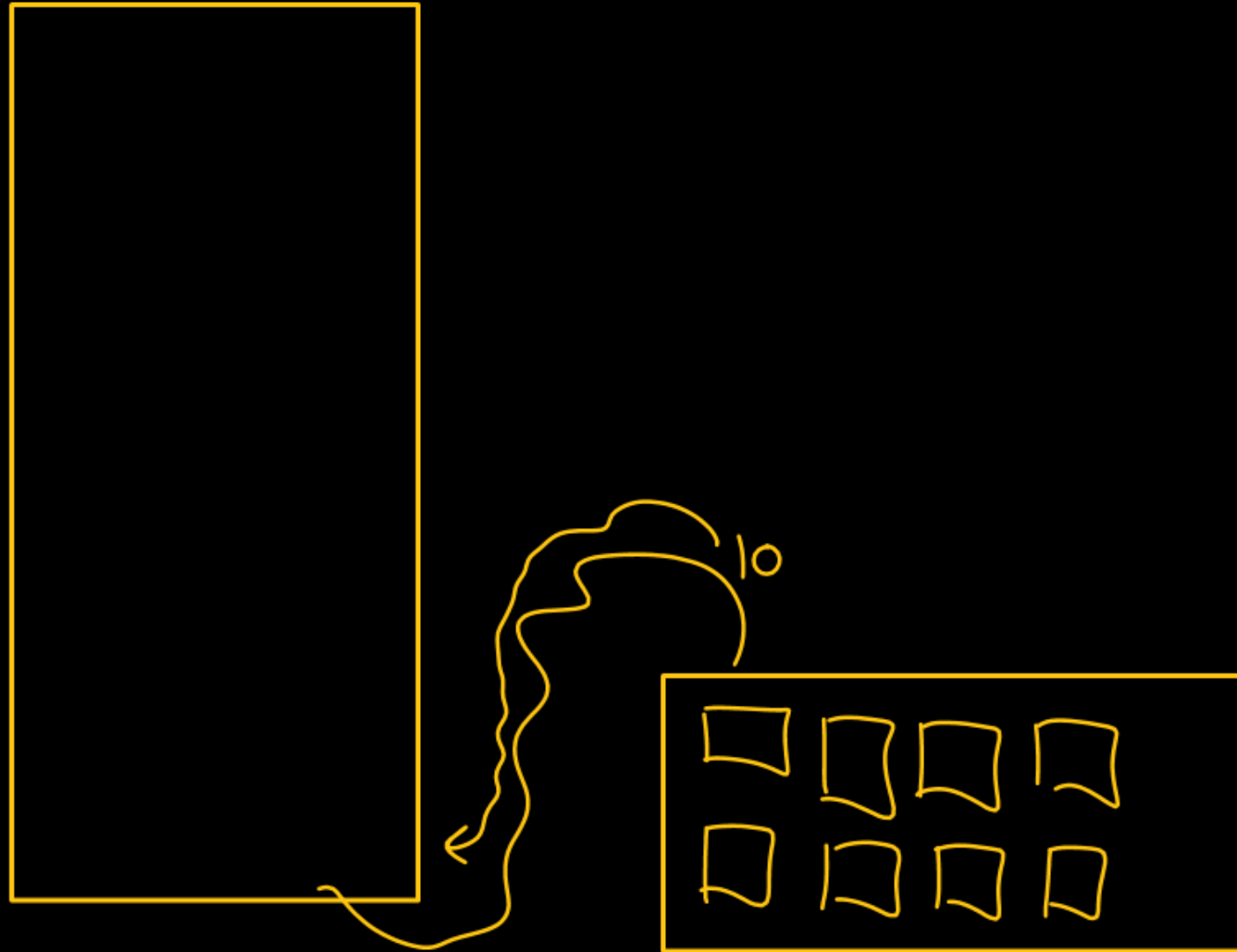
Computer
(M/C)

0, 1



input , output

int Age;



		2016	

Age

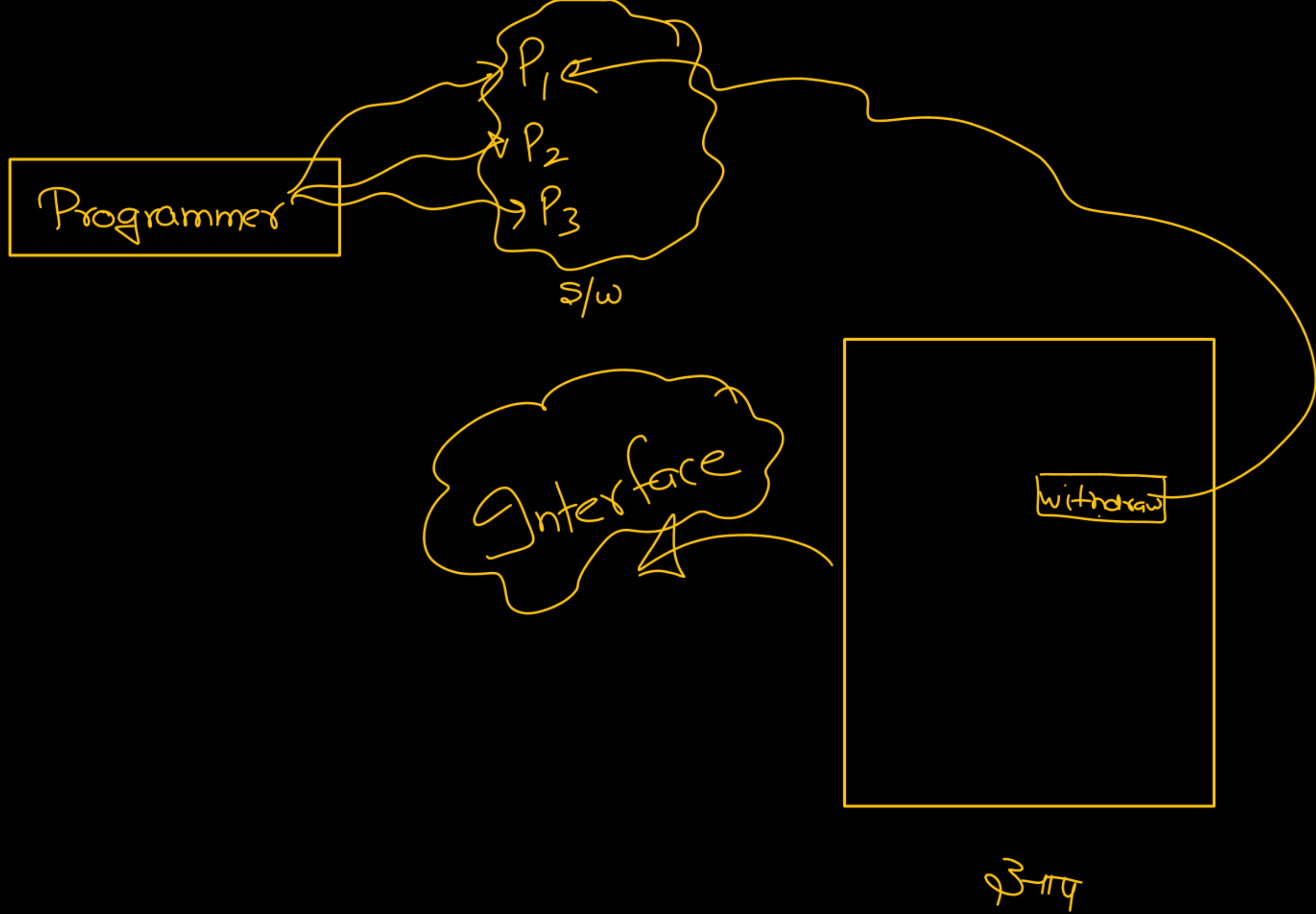
① 3 lectures
→ 2x speed

1,2,3

Notice →

① Programmer

② user

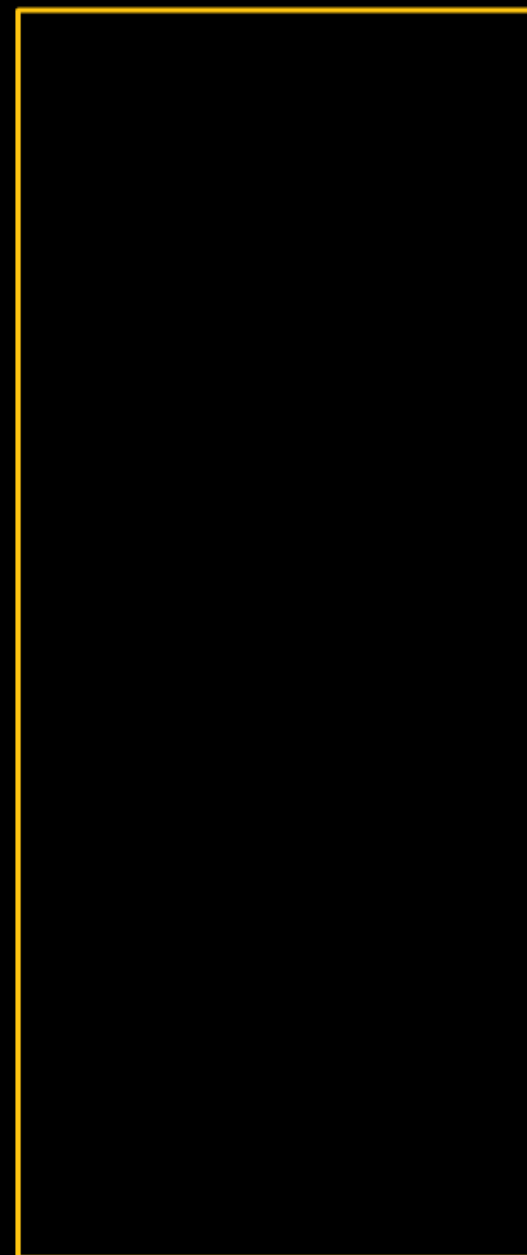
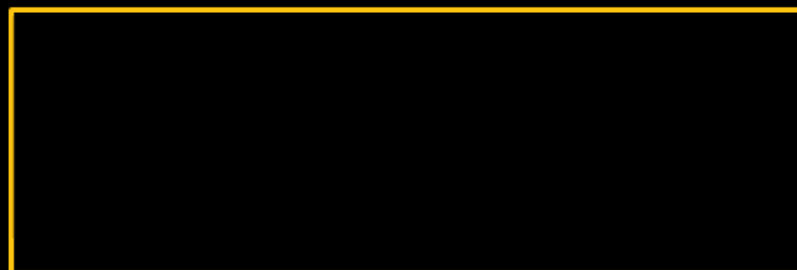


① Every prog. lang. must have the feature to take i/p from keyboard.

② Every prog. lang. must have the feature to provide o/p to screen.

To
the —

1



```
#include<stdio.h>
void main(){
}
```

① Compiler

```
}
void main(){
    printf("Pankaj");
}
```

Diagram illustrating the compilation process:

- A red squiggly line connects the closing brace of the first code block to the opening brace of the second code block.
- A red circle highlights the `printf("Pankaj");` statement in the second code block.
- Two red arrows point from the word "Compiler" to the `printf` statement.
- A red checkmark is placed below the second code block.

Output:

```
Pankaj
```

```
#include<stdio.h>
void main(){
printf("Pankaj");

}
```

integer
~~short, long, long long~~

int Age = 10; ✓

No. with
decimal
point

float g = 9.8; ✓
double

Textual
data

char ch = '@';

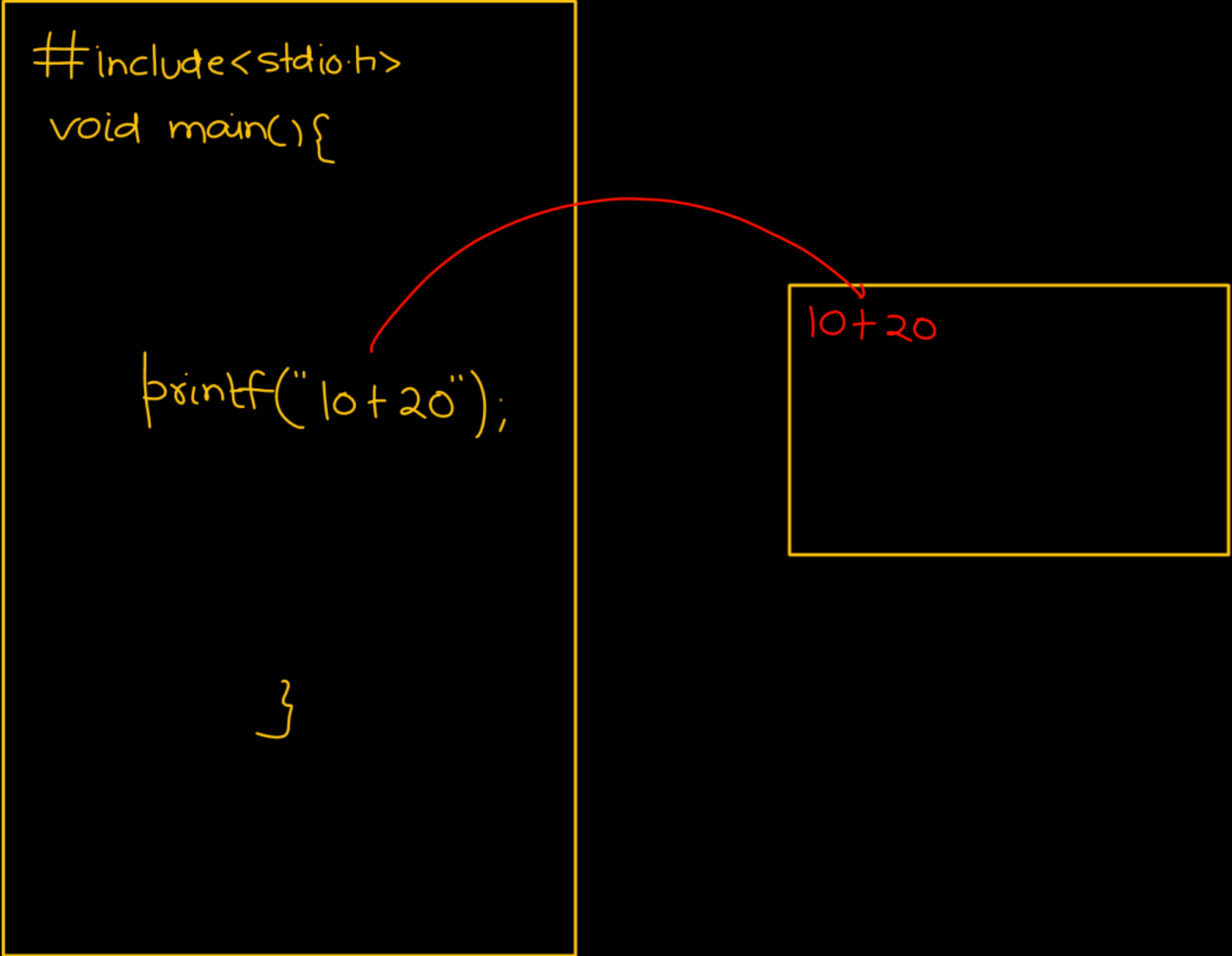
1 Symbol

```
#include <stdio.h>  
void main(){
```

```
printf("10+20");
```

```
}
```

10+20



```
void main(){
```

```
    int a = 10;
```

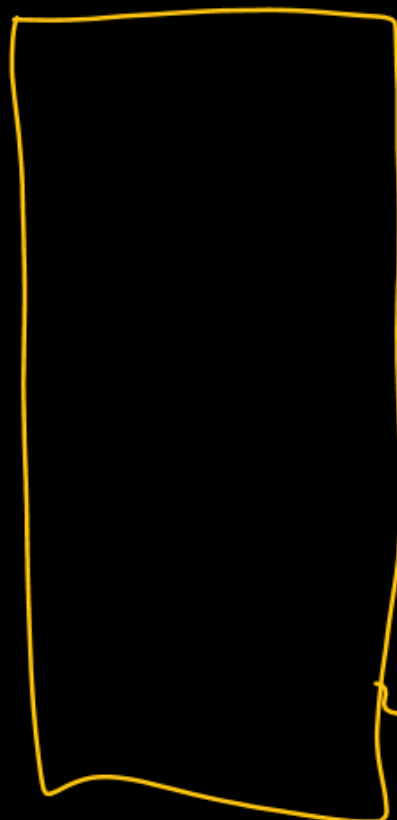
```
    printf("a");
```

```
}
```

format

a

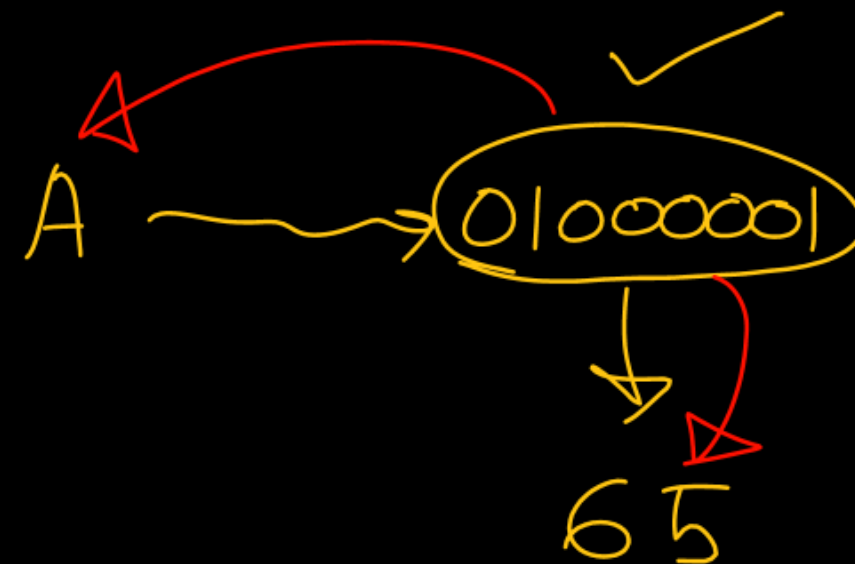
Specify → format



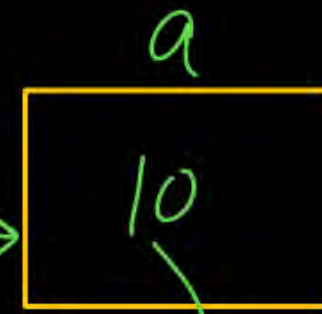
01010001



a
A
19



/d → int %f → float
/c → char



```
void main(){  
    int a = 10;  
    printf("The value is %d", a)  
}
```

The value is 10

O/P screen

printf → (o/p) print

& ⇒ address of

scanf → To read/take input coming from keyboard.

	Age
	9
	2016



01000001

A 10



```
void main(){  
    int Age;  
    printf("Enter a number");  
    scanf("%d", &Age);  
}
```

