Basics of pointer

int n1; // 20

int *n1 // pointer

double n2;

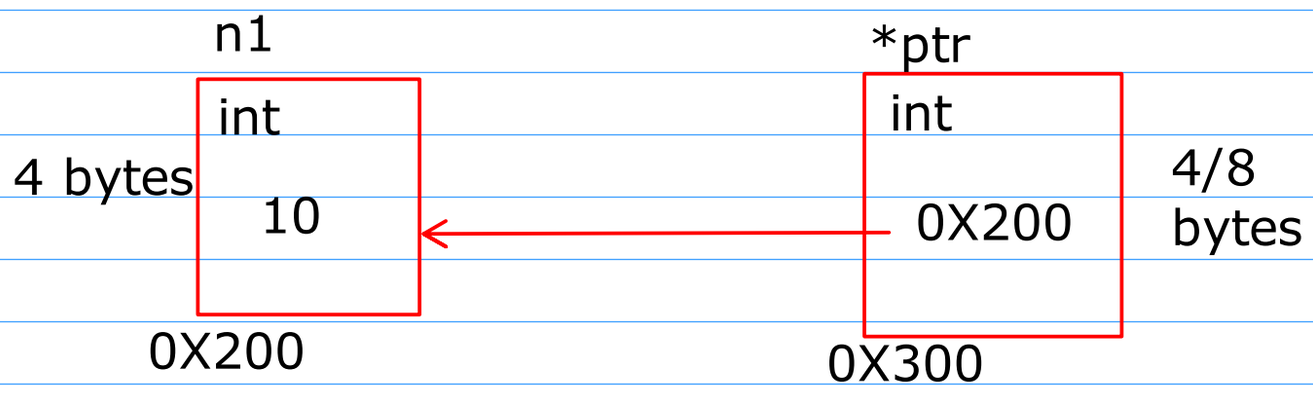
double *n2

struct Time{

}

struct Time t1;

struct Time *t1



int n1=10;
int *ptr = &n1;

n1 -> 10
&n1 ->0X200

ptr -> 0X200
&ptr -> 0X300
*ptr -> 10 // dereferencing

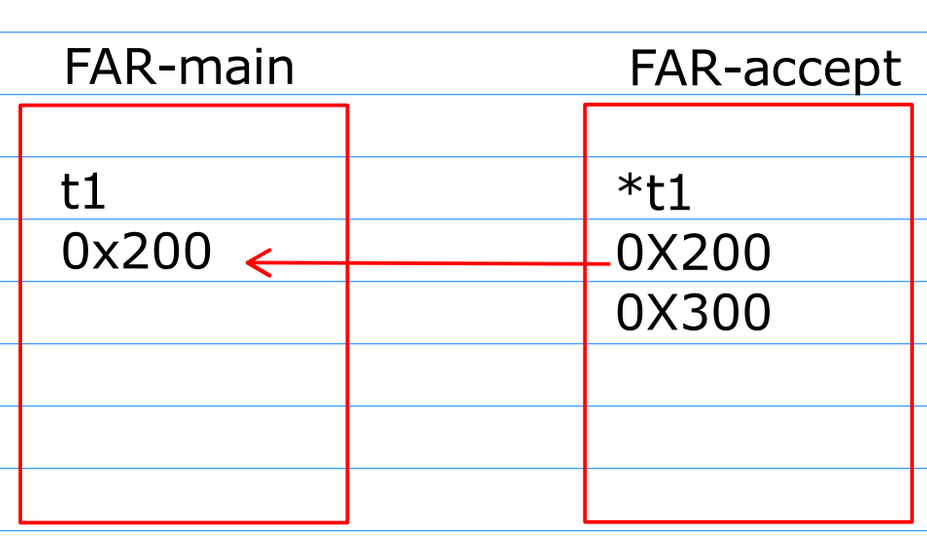
int main(){
struct Time t1;
//accept(t1); // pass by value
accept(&t1);
}
void accept(struct Time *t1){
}

Text/Code
statements

Stack
local variables

Heap
dynamic memory
allocation

Data
static and
global



Abstract level

Data type

It defines 3 things

1. Nature (Number, Alphabet, words, fractional)
2. Memory (amount of space requierd to store the data)
3. Operations (different type of operations that we can carry out)

1. Fundamental Datatypes
   void,int,char, float,double,bool,wchar_t

2. UserDefined Datatypes
   pointer,array,structure,class

bool -> boolean

ASCII
1 byte
0-255

utf-8 utf-16

2 bytes
65K

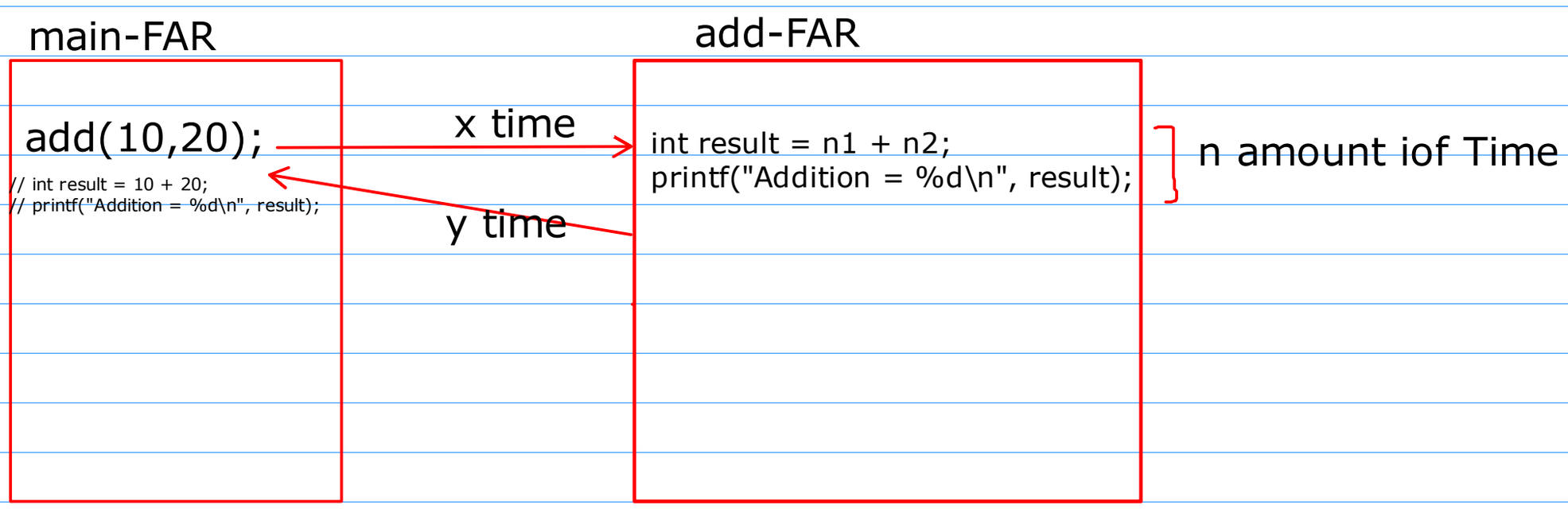
ASCII
0
1
2
3
.
.
.
65 - A
66 - B
.
.
.
255

wchar_t
0 - A
1 - B
2
3
.
.
.
65 - A
66 - B
.
.
.
255

.
.
.
.
.
.
65K...

```
bool isLeapYear(){
        if(.....){
        return true;
        }
        return false;
}
```

Inline Function



x + y > n

(FAR Creation Time) + (FAR destruction Time) > (Execution Time)

Inline is just a request made towards the compiler

Namespace

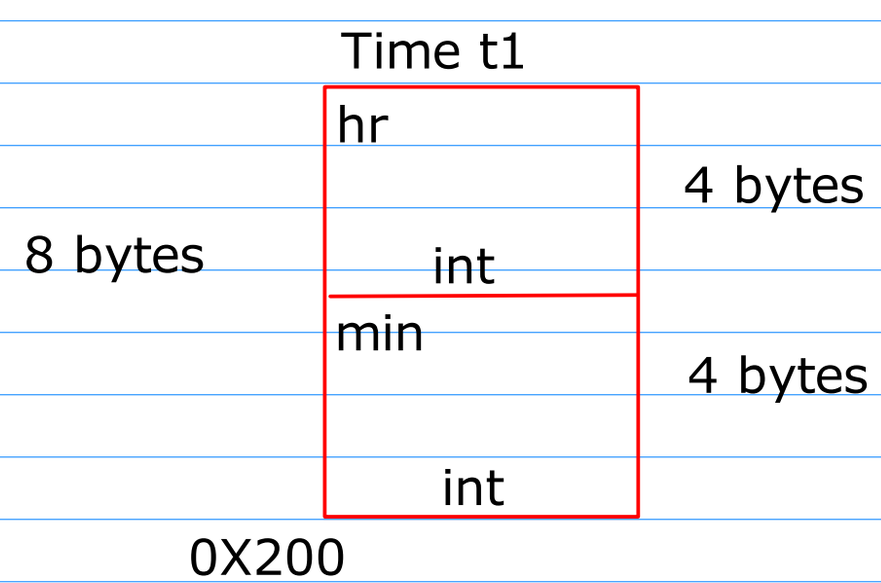
- It is a container used to organize the code
- We cannot instantiate the namespace
- It cannot be defined locally

Class

- It is a Logical entity
- It is also called as blueprint of an object
- It consists of data members and member functions

Object

- It is a physical entity
- It is also called as instance of the class



istream cin;
ostream cout;

cin >> (Extraction Operator) // To accept the values from user -> scanf()

cout << (Insertion Operator) // To display the contents on console -> printf()

Object
- It defines 3 things
1. state
    - data members of the class represents the state of an object
2. behaviour
    - member functions of the class represents the behaviour of an object
3. Identity
    - The unique datamember in the class represents the identity of an object.
    If no any unique data member is present then address of the object is considered as identity

Naming Convention
1. Camel case
    - First letter of every word should be capital except first word
    - eg- total, totalSalary, calculateTotalSalary
    - local variables, function name, function parameters and data members
2. Pascal case
    - First letter of every word should be capital
    - eg - Employee,SalesManager

class Members
Types of member functions