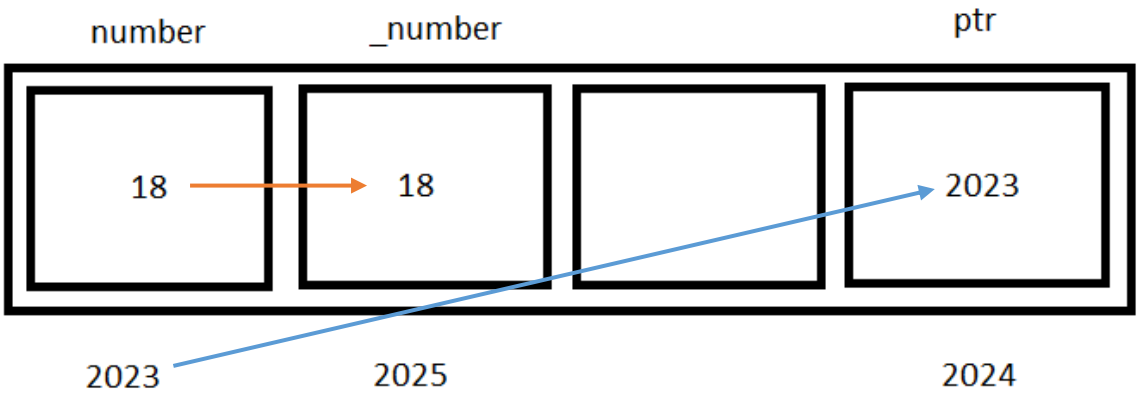
Pointers

A pointer is a variable that stores the memory address of another variable as its value.



A pointer variable points to a data type (like int) of the same type, and is created with the * operator.

Syntax

```
int number = 18;  //  * = value at address operator

int *ptr = &number;  // & = address of operator

int _number = *ptr;  // storing the value in another variable
```

Declaration of pointers

```
int *ptr;         //int number = 18;

char *ptr;      //char character = “a”;

float *ptr;     //float tax = 7.2;
```

Format specifier

```
printf(“%p”, &number);

printf(“%p”, ptr);

printf(“%p”, &ptr);
```

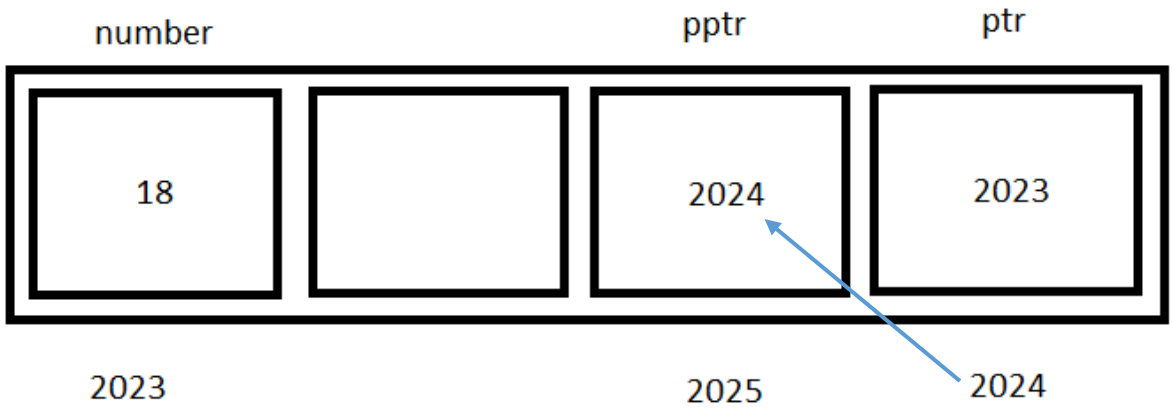
printf("%d\n", number); → 18

printf("%d\n", *ptr); → 18

printf("%d\n", *(&number)); → value(address)

Pointer to Pointer

A variable that stores the memory address of another pointer.



Syntax

int **pptr;

char **pptr;

float **pptr;

Function pointer

- Call by Value → We pass value of variable as argument.
- Call by Reference → We pass address of variable as argument.