Variables in C

A C program is made up of two parts: instructions and data. Variables allows users to operate on data. In simple terms, a variable is a name assigned to a memory block in the main memory.

They are basically a label to memory location. We can access, store and update data using these labels.

Example:

C

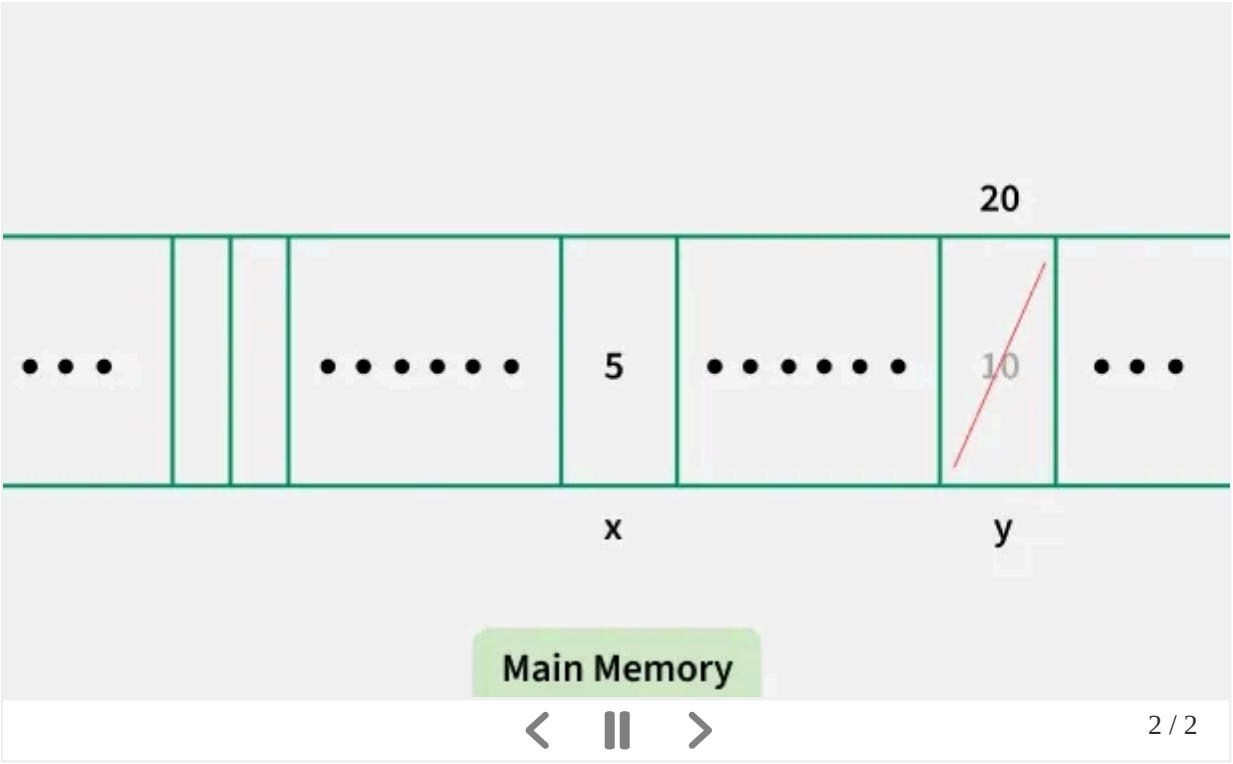
```c
#include <stdio.h>

int main()
{
    int x = 5;
    printf("%d \n", x);

    int y = 10;
    printf("%d \n", y);

    int descriptive_names_are_better = 20;
    printf("%d \n", descriptive_names_are_better);

    return 0;
}
```

```
5
10
20
```

Output

```
5
10
20
```

The below image shows the memory associated with x and y and how the data inside it changes according to the above program:



As you may have noticed, these is a text **int** before each variable name. As C is a static typed language, we have to explicitly declare variable type before variable name. In the above code, we place **int** before the variable **x**, indicating that **int** is an integer data type.

In above code, we declare names of variable are randomly as **x** and **y**, but this is not a right way to declare variable names. In practical projects, a variable name should tell the readers about the purpose of the variable. For example, if variable represent age of a person, then variable name is **age**.