

## POINTERS

**A pointer is a variable that stores an address/memory location.**

**It provides indirect access to a value.**

**Example:**

```
int a=5; //a is an int-type variable
```

```
int *b; //b is a pointer to an int-type value
```

```
b=&a; //b has the address of a  
// &-means address
```

**We can also extend this by having a pointer to another pointer.**

```
int **c;  
c=&b; // c holds the address of b, which is a pointer to an integer.
```

VARIABLE	VALUE	ADDRESS
a	5	@31a
b	@31a	124c
c	124c	458s

**Based on the diagram above: (NOTE: & - ADDRESS \* - VALUE)**

<b>a - 5</b>	<b>b - @31a</b>	<b>c - 124c</b>
<b>&amp;a - @31a</b>	<b>&amp;b - 124c</b>	<b>&amp;c - 458s</b>
<b>*a – INVALID since a is not a pointer</b>	<b>*b - 5</b>	<b>*c - @31a</b>
<b>**a – INVALID since a is not a pointer to another pointer</b>	<b>**b – INVALID since a is not a pointer to another pointer</b>	<b>**c - 5</b>