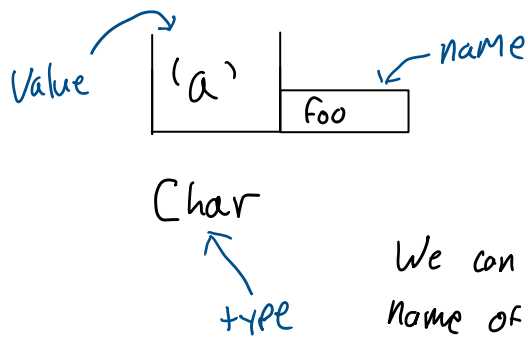


Consider a Char variable foo with value 'a':

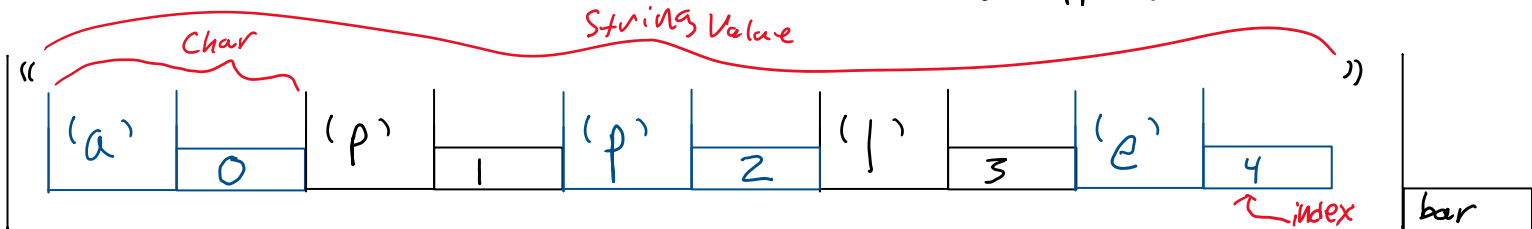


It is a "box" with a name. Inside the box is a value of the same data type of the variable

We can access the value by using the name of the variable:

```
Std::cout << foo; // outputs the character
                  // stored in foo
```

Now consider a String variable bar with the value "apple":



Again, to access the value of bar, we use its name:

```
Std::cout << bar; // outputs the string stored in the variable bar
```

Now, there is something different about string variables that we notice from the diagram. It seems like the String box has a bunch of char variables in it, a box of boxes if you will.

The "names" of the chars in a string are numbers that correlate to their position in the string. We can consider these numbers the char's index. To access the char in a string by its index, we need to open the string's box and then tell the computer which box in the string box to open. Observe: `Std::cout << bar[0];` // Prints the letter a