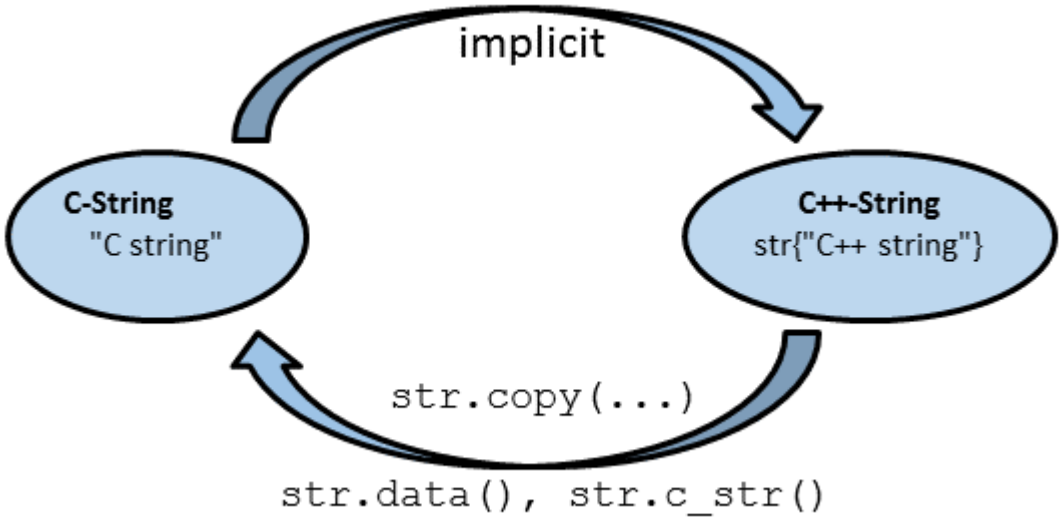
Conversion Between C++ and C Strings

There are several ways to convert C++ strings to C strings. Let's go through them now.

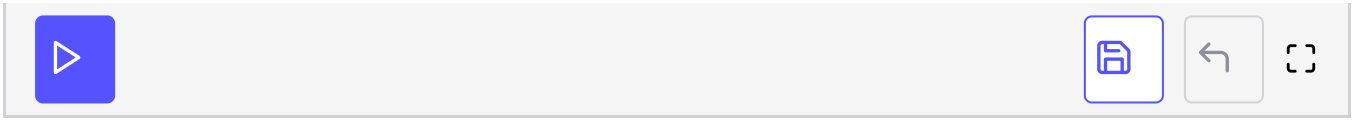


While the conversion of a C string in a C++ string is done implicitly, we must explicitly request conversion from a C++ string into a C string. `str.copy()` copies the content of a C++ string without the terminating `\0` character. `str.data()` and `str.c_str()` include the terminating null character.

> ⚠ **Be careful with str.data() and str.c_str()**
> The return value of the two methods `str.data()` and `std.c_str()` becomes invalid if `str` is modified.

```
#include <iostream>
#include <string>

int main(){

  std::cout << std::endl;

  std::string str{"C++-String"};
  std::cout << str << std::endl;
  str += " C-String";
  std::cout << str << std::endl;

  const char* cString= str.c_str();
```

```
  char buffer[10];
  str.copy(buffer, 10);

  str+= "works";
  const char* cString2= cString;

  std::string str2(buffer, buffer+10);
  std::cout << str2 << std::endl;

  std::cout << std::endl;
}
```



In the next lesson, we'll learn about the difference between size and capacity with respect to strings.