## 22.2 — std::string construction and destruction

▲ ALEX ♠ AUGUST 26, 2021

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**String construction** 

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#### R\_k njcembcIJ

```
1 | std::string sSource{ "my string"
    };
2 | std::string sOutput{ sSource };
3 | std::cout << sOutput;</pre>
```

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my string

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#### R\_k njcembcIJ

```
std::string sSource{ "my string"
};
std::string sOutput{ sSource, 3
};
std::cout << sOutput<< '\n';
std::string sOutput2(sSource, 3, 4);
std::cout << sOutput2 << '\n';</pre>
```

#### Ns rns rIJ

```
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stri
```

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#### R\_k njcembcIJ

```
1 | const char *szSource{ "my string"
};
2 | std::string sOutput{ szSource };
3 | std::cout << sOutput << '\n';</pre>
```

#### Ns rns rIJ

```
my string
```

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#### R\_k njcembcIJ

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### R\_k njceambcIJ

```
1 | std::string sOutput(4, 'Q');
2 | cout << sOutput << endl;

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```

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String destruction

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**Constructing strings from numbers** 

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```
1 | std::string sFour{ 4 | };
```

#### OpmbsacqefcephjjmugleecppmpIJ

```
c:vcprojectstest2test2test.cpp(10) : error C2664: 'std::basic_string<_Elem,_Traits,_Ax>::basic_string(std::b
asic_string<_Elem,_Traits,_Ax>::_Has_debug_it)' : cannot convert parameter 1 from 'int' to 'std::basic_strin
g<_Elem,_Traits,_Ax>::_Has_debug_it'
```

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```
cannot convert parameter 1 from 'int' to 'std::basic_string
```

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

template <typename T>
inline std::string ToString(T)

tX)
{
  std::ostringstream
  oStream;
  oStream << tX;
  return oStream.str();
}</pre>
```

#### GcpcNyepmkcep\_knjcepmbcepmepcqregrIJ

```
int main()
{
    std::string sFour{ ToString(4) };
    std::string sSixPointSeven{ ToString(6.7)
};

std::string sA{ ToString('A') };
    std::cout << sFour << '\n';
    std::cout << sSixPointSeven << '\n';
    std::cout << sA << '\n';
}
</pre>
```

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```
4
6.7
A
```

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**Converting strings to numbers** 

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

template <typename T>
inline bool FromString(const std::string& sString, T &tX)

{
    std::istringstream iStream(sString);
    return !(iStream >> tX).fail(); // extract value into tX, return success or not
}
```

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```
1  int main()
2  {
3     double dX;
4     if (FromString("3.4",
     dX))
        cout << dX << '\n';
5     if (FromString("ABC",
     dX))
        cout << dX << '\n';
}</pre>
```

@l berf censrnsrIj

```
3.4
```

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**49 COMMENTS** 

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