# 1 Variable Templates

One notable feature introduced in C++14 is the **variable template**. Variable templates allow us to define parameterized constants, making it easy to work with constants of different types. Here's a simple example of how we can define $\pi$ using a variable template:

```cpp
template<class T>
const T pi = T(3.14159265358979323);
```

In this code, `pi` is a variable template that can be instantiated with various types. The variable template allows $\pi$ to be used with different data types, such as `double` or `int`, without needing to write separate definitions for each type.

```cpp
#include <iostream>

template<class T> const T pi = T(3.14159265358979323);

int main()
{
    using namespace std;
    cout << "math:" << pi<double> << endl; // 3.14159
    cout << "engineering:" << pi<int> << endl; // 3
}
```