

Templates

(Winter 2015)

Write a simple function template for predicate function `isEqualTo` that compares its two arguments of the same type with the equality operator (`==`) and returns true if they are equal and false if they are not equal. Use this function template in a program that calls `isEqualTo` only with a variety of built-in types such as `int`, `double`, and `char`.

We also want this function to compare two complex numbers. In order to do that, develop a user-defined class type (called class `Complex`) that implements a complex number (object) with two private attributes `real` (real part of the complex number) and `imaginary` (imaginary part of the complex number). Then in your program, try to call the `isEqualTo` to compare two complex objects.

Hint: in the class `Complex`, you need to declare an overloaded equality operator below.

```
bool operator==( const Complex &number ) const
{
    return ....;
}
```