

## RealMatrix: public Matrix<double>

```
+ <<explicit>> RealMatrix(row_count: int = 1, column_count: int = 1)
+ <<const>> operator +(rhs: const RealMatrix&): const RealMatrix
+ <<const>> operator -(rhs: const RealMatrix&): const RealMatrix
+ <<const>> operator *(rhs: const RealMatrix&): const RealMatrix
+ <<const>> operator *(rhs: const double&): const RealMatrix
+ <<const>> operator *(rhs: const ColumnMatrix<double>&): const RealMatrix
+ <<const>> operator /(rhs: const double&): const RealMatrix
+ operator +=(rhs: const RealMatrix&): RealMatrix&
+ operator -=(rhs: const RealMatrix&): RealMatrix&
+ operator *=(rhs: const RealMatrix&): RealMatrix&
+ operator *=(rhs: const double&): RealMatrix&
+ operator *=(rhs: const ColumnMatrix<double>&): RealMatrix&
+ operator /=(rhs: const double&): RealMatrix&
+ loadNullMatrix(): void
+ loadIdentityMatrix(): void
+ <<const>> transpose(): RealMatrix
+ <<const>> isSquare(): bool
+ <<const>> isRowMatrix(): bool
+ <<const>> isColumnMatrix(): bool
+ <<const>> clone(): RealMatrix*
<<friend>> operator *(lhs: const double&, rhs: const RealMatrix&): const RealMatrix
<<friend>> operator *(lhs: const RowMatrix<double>&, rhs: const RealMatrix&): const RealMatrix
<<friend>> operator *(lhs: const ColumnMatrix<double>&, rhs: const RowMatrix<double>&): const RealMatrix
<<friend>> operator *=(lhs: RowMatrix<double>&, rhs: const RealMatrix&): RowMatrix<double>&
```

## Auxiliary real row and column matrix related arithmetical binary operators

```
operator * (lhs: const RowMatrix<double>&, rhs: const ColumnMatrix<double>&): double
operator + (lhs: const RowMatrix<double>&, rhs: const RowMatrix<double>&): const RowMatrix<double>
operator - (lhs: const RowMatrix<double>&, rhs: const RowMatrix<double>&): const RowMatrix<double>
operator * (lhs: const RowMatrix<double>&, rhs: const double&): const RowMatrix<double>
operator * (lhs: const double&, rhs: const RowMatrix<double>&): const RowMatrix<double>
operator +=(lhs: RowMatrix<double>&, rhs: const RowMatrix<double>&): RowMatrix<double>&
operator -=(lhs: RowMatrix<double>&, rhs: const RowMatrix<double>&): RowMatrix<double>&
operator *=(lhs: RowMatrix<double>&, rhs: const double&): RowMatrix<double>&
operator /=(lhs: RowMatrix<double>&, rhs: const double&): RowMatrix<double>&
operator + (lhs: const ColumnMatrix<double>&, rhs: const ColumnMatrix<double>&): const ColumnMatrix<double>
operator - (lhs: const ColumnMatrix<double>&, rhs: const ColumnMatrix<double>&): const ColumnMatrix<double>
operator * (lhs: const ColumnMatrix<double>&, rhs: const double&): const ColumnMatrix<double>
operator * (lhs: const double&, rhs: const ColumnMatrix<double>&): const ColumnMatrix<double>
operator +=(lhs: ColumnMatrix<double>&, rhs: const ColumnMatrix<double>&): ColumnMatrix<double>&
operator -=(lhs: ColumnMatrix<double>&, rhs: const ColumnMatrix<double>&): ColumnMatrix<double>&
operator *=(lhs: ColumnMatrix<double>&, rhs: const double&): ColumnMatrix<double>&
operator /=(lhs: ColumnMatrix<double>&, rhs: const double&): ColumnMatrix<double>&
```