

## New Added Features: Sorting & Searching

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The following code snippet demonstrates the current new added feature functionalities in mixutil.h

```
#if !defined(REQUIRE_H)
    #include "D:\MIXUTIL\User\Libs\mixutil.h"
#endif

struct _xItem
{
    _xItem() = default;
    ~_xItem() = default;

    _xItem(int const _brId, std::string const& _brName)
    : _brandId(_brId), _brandName(_brName)
    {

    }

    operator char() const {
        return this->_brandName[0];
    }

    operator int() const {
        return this->_brandId;
    }

    int _brandId;
    std::string _brandName;
};

void _printItems(const std::vector<_xItem>& _vitemX)
{
    for (auto const& _ix : _vitemX)
    {
        RPRINT(_ix._brandId); RPRINT("=>"); RPRINT(_ix._brandName);
        RET;
    }
}

int main()
{
    std::vector<_xItem> vtx = {
        {201, "OLED Touchscreen Panel"},
        {110, "Universal Wireless Charger"},
    }
```

```

{105, "Bluetooth Speaker"},
{98, "Office Desk Stand"},
{115, "LED Light Tube"}
};

_xItem xi;
std::vector<_xItem>::iterator iGetX;

// sort the data elements based on '_brandId' (int)
mix::generic::
fast_sort(vtx.begin(), vtx.end(), mix::generic::numLess());

_printItems(vtx);

RET;

xi._brandId = 110;

// search item which Id = 110
if (mix::generic::
    vector_search(vtx.begin(), vtx.end(), xi, mix::generic::numLess(),
        iGetX))
{
    RPRINT(iGetX->_brandId); RPRINT("=>");
    RPRINT(iGetX->_brandName);
    RET;
}
else PRINT("Item not Found !!");

RET;

// sort the data elements based on '_brandName' (char)
mix::generic::
fast_sort(vtx.begin(), vtx.end(),
    mix::generic::NLess<char>());

_printItems(vtx);

RET;

xi._brandName = "OLED Touchscreen Panel";
char _c = xi._brandName[0];

// search item which brand name = 'Office Desk Stand'
if (mix::generic::
    vector_search(vtx.begin(), vtx.end(), _c,
        mix::generic::NLess<char>(), iGetX))
{
    RPRINT((iGetX - 1)->_brandId); RPRINT("=>");
    RPRINT((iGetX - 1)->_brandName); RET;

    RPRINT(iGetX->_brandId); RPRINT("=>");
    RPRINT(iGetX->_brandName); RET;

    RPRINT((iGetX + 1)->_brandId); RPRINT("=>");

```

```
        RPRINT((iGetX + 1)->_brandName); RET;  
    RET;  
}  
else PRINT("Item not Found !!");
```

```
vtx.clear();
```

```
RET2();  
return -1;
```

```
}
```