

Two_Dimensional_TInt_Array_in_Symbian

The implementation below shows the creation to two dimensional integer array in symbian. The diagrammatic structure of implementation is given below for clear explanation.

Header File

```
#ifndef __TWO_DIMENSIONAL_H__
#define __TWO_DIMENSIONAL_H__

#include <e32std.h>

typedef RArray<TInt> RIntegerArray;

class R2DIntArray: public RPointerArray <RIntegerArray>
{
public:
    ~R2DIntArray();
    void ResetAndDestroy();
    inline TInt& At(TInt a1, TInt a2) { return ((*this)[a1])[a2]; }
    TInt FindInteger();
    void Add(TInt aInteger);

    void AppendLast(TInt aPosition, TInt aValue);

};
#endif
```

Functions Implementation

```
// destructor
R2DIntArray::~R2DIntArray()
{
    ResetAndDestroy();
};

void R2DIntArray::ResetAndDestroy()
{
    for (TInt i=0; i<Count(); i++)
    {
        (*this)[i]->Reset();
    }
    RPointerArray<RIntegerArray>::ResetAndDestroy();
};

// Finding the particular integer value
TInt R2DIntArray::Find(TInt aInteger)
{
```

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```
for (TInt i=0; i<Count(); i++)
if (aInteger == ((*this)[i])[0])
return i;
return KErrNotFound;
}

// adding the entry
void R2DIntArray::Add(TInt aInteger)
{
    (nAppendIntegerArray);
    (*this)[Count() - 1]->Append(aInteger);
}

// Appending the entry

void R2DIntArray::AppendLast(TInt aPosition, TInt aValue)
{
    (*this)[aPosition]->Append(aValue);
}
```

Two Dimensional Array Usage

```
R2DIntArray 2DArray;
2DArray.Reset();
2DArray.At(j,0)
2DArray.At(j,1)
2DArray.Count()

TInt j= 0 ; // value less than count of array.
TInt word = 25 // Any integer value.

RPointerArray<R2DIntArray> 2DPtrArray;
2DPtrArray.Append(new R2DIntArray);
2DPtrArray[0]->At(j,1); // refer to diagram above for clear understanding
TInt retWord = 2DPtrArray[0]->Find(word);
if(retWord != KErrNotFound)
{
    // you got the index of the searched word
}
```

• RPointerArray<R2DIntArray> 2DPtrArray

(j) -> (0)(1)

[0] -> [0][20]

[1] -> [1][25]

[2] -> [2][35]

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[3] -> [3][45]

- **R2DIntArray 2DArray**

(0)(1)

[0][20]

[1][25]

[2][35]

[3][45]