Memory Diagram

Sunday, June 6, 2021   9:11 PM

```
/***********************************************/
```

```cpp
// Create an array of Point pointers with 3 elements on the heap.
Point** pArr = new Point*[3];
```

Heap:

pArr:

pArr[0]	pArr[1]	pArr[2]

```
/***********************************************/
```

```cpp
// Create for each element in the array a point on the heap.
// Iterate the array and print each point in the array.
for (int idx=0; idx<3; idx++)
{
    pArr[idx] = new Point( newX: 1, newY: 1);
    cout << "pArr[" << idx << "] = " << *pArr[idx] << " created at location " << pArr[idx] << endl;
}
```

Heap:

pArr:

Address to Point(1,1)	Address to Point(1,1)	Address to Point(1,1)
pArr[0]	pArr[1]	pArr[2]

```
/***********************************************/
```

```cpp
// Iterate the array again and delete each point in the array.
for (int idx=0; idx<3; idx++)
{
    cout << "Deleting " << *pArr[idx] << " at location " << pArr[idx] << endl;
    delete pArr[idx];
}
```

Heap:

pArr: Delete each elements of the array on the heap

pArr[0]	pArr[1]	pArr[2]

```
/***********************************************/
```

```cpp
delete[] pArr; // Delete array of pointers
```

Heap: Delete pArr on the Heap: