

1. Dynamic 1-d array:

In c++, for the static array, the size CANNOT be a variables.

```
int n;  
cin >>n;  
int a[n]; // compiler error.
```

To declare a dynamic array, we use pointer:

```
int n;  
cin>>n;  
int * q = new int[n];  
/*  
code goes here  
*/  
delete[] q;
```

2. Dynamic 2-d array:

```
int row =5;  
int col = 10;  
int ** p = new int * [row];  
for(int i =0;i<row;i++){  
    p[i] = new int[col];  
}  
for(int i =0;i<row;i++)  
    for(int j = 0;j<col;j++)  
        p[i][j]=0;  
/*  
Code  
*/  
for(int i =0;i<row;i++){  
    delete[] p[i];  
}  
Delete []p;
```

3. Dynamic 2-d array:

```
int col =5;  
int * p[10]; // p is an array. Size is 10, element is pointer to int.  
for(int i=0;i<10;i++)  
    p[i]=new int[col];  
  
for(int i =0;i<10;i++)  
    for(int j = 0;j<col;j++)  
        p[i][j]=0;  
/*  
Code  
*/  
for(int i =0;i<10;i++)  
    delete[] p[i];
```