

Void *

`svn+ssh://zeus.cs.pacificu.edu/home/CS300Public/2018/CS300PublicSVN`

Dynamic vs Static

```
int staticInt;
```

```
int *pDynamicInt;
```

```
int staticArray[100];
```

```
int *pDynamicArray;
```

Void *

- How do we write an Array that accepts **any** data type?

- ArrayOfVoidStars.c

```
12 #include <stdio.h>
13 #include <stdlib.h>
14
15 #define MAX_DATA 10
16
17 int main ()
18 {
19     void *pData[MAX_DATA];
20     int i;
21
22     puts ("PROGRAM START");
23
24     for (i = 0; i < MAX_DATA; ++i)
25     {
26         if (i % 2 == 0)
27         {
28             pData[i] = malloc (sizeof (int));
29             *(int *) pData[i] = i;
30         }
31         else
32         {
33             pData[i] = malloc (sizeof (double));
34             *(double *) pData[i] = (double) i;
35         }
36     }
37
38     // Write a loop for each of the following ... i.e. 4 different loops
39     // 1. Free all dynamically allocated memory
40     // 2. Pointers 0 through MAX_DATA - 1 are to point to 'A', 'B', 'C',...
41     // 3. Print out each character
42     // 4. Free all dynamically allocated memory
43
44
45     puts ("PROGRAM END");
46
47     return 0;
48 }
```