

CSP3502 Agenda 8/30/21

① Please wear your mask!

② Dyn Mem Alloc

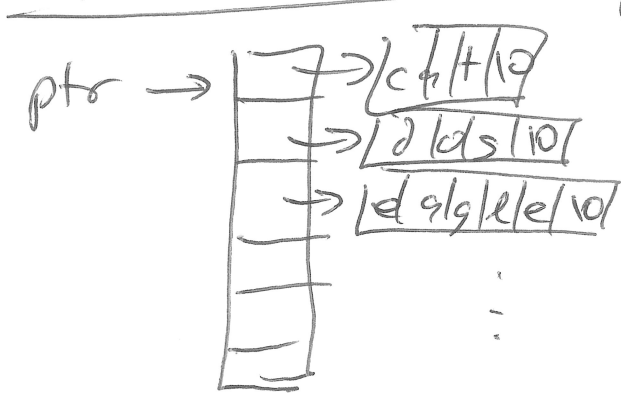
③ array primitives

* ④ 2D array (array of arrays)
primitive

⇒ ⑤ array of struct

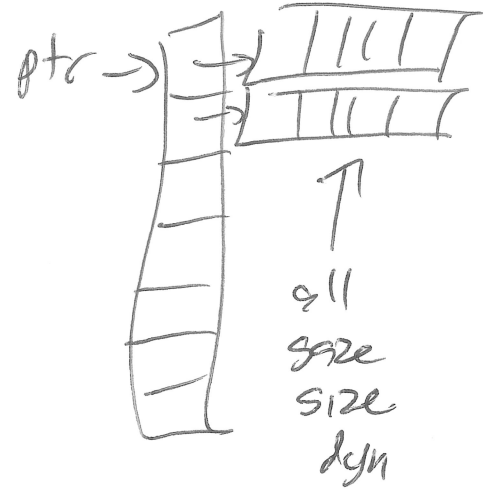
⑥ array of pointers to struct

2D array



dyn
alloc
little
arrays

(2)



main

plist = readList(fN, &numw);

plist →

numw → 1000000

fileName → "dictionary.txt"

~~readList~~

~~fileName~~

~~we~~

~~plist~~



③

③ Dyn allocate array of struct

```
typedef struct pt {
```

```
    int x;
```

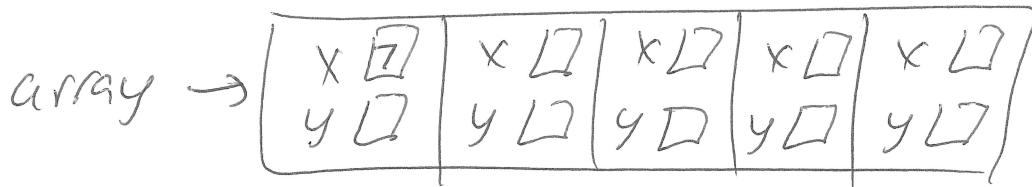
```
    int y;
```

```
} pt;
```

how many items

n S

```
pt* array = malloc(n * sizeof(pt));
```



`array[0].x = 7;` // To access something in a struct use `.`

```
for (int i = 0; i < n; i++)
```

```
    scanf("%d %d", &array[i].x,  
          &array[i].y);
```

[]

→ array

`.`

→

struct

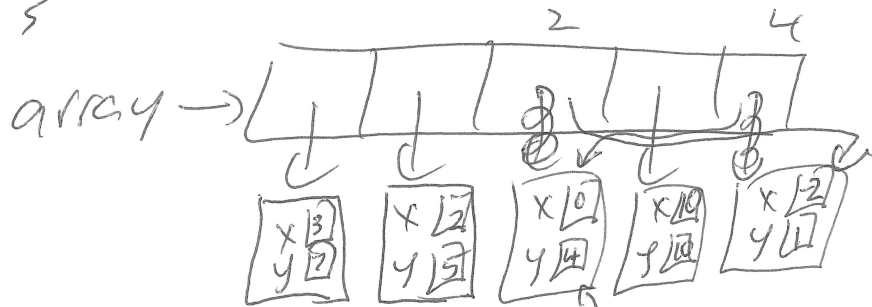
→

→

ptr to struct

④ Dyn allocate array of pointers to struct ④

```
pt** array = malloc(n * sizeof(pt*));  
for (int i=0; i<n; i++) {  
    array[i] = malloc(sizeof(pt));  
    scanf("%d %d", &array[i]→x,  
           &array[i]→y);  
}
```



```
pt* tmp = array[i];  
array[i] = array[j];  
array[j] = tmp;
```

i [2]
j [4]