# Arrays and loops

Adapted from materials by Dr. Carrier



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Declaring:

int arr[10];

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```
int arr[10];
int arr[3] = {2, 4, 6};
```

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```
int arr[10];
int arr[3] = {2, 4, 6};
char arr[5];
```

All elements in a C array have the same type For now, we are talking about *static* arrays l.e., fixed size

```
int arr[10];
int arr[3] = {2, 4, 6};
char arr[5];
char arr[] = "hello world";
```

# Array indexing

We still access elements like in every other language (zero-indexed)

```
int arr[3] = \{2, 4, 6\};
```

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```
int arr[3] = \{2, 4, 6\};
int x = arr[1];
```

# Array indexing

We still access elements like in every other language (zero-indexed)

```
int arr[3] = {2, 4, 6};
int x = arr[1];
arr[2] = 0;
```

# For loops

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```
unsigned int i;
for(i = 0; i < 10; i++){
...
}</pre>
```

### For loops

```
unsigned int i;
for(i = 0; i < 10; i++){
...
}</pre>
```

Newer versions of C allow you to create iterative variable inside the loop line

# While loops

```
while(condition) {
    ...
}
```

### While loops

```
while(condition) {
    ...
}
```

```
int i = 10;
while(i >= 0){
...
i--;
}
```