

Arrays

- Arrays can be defined/initialized using `arr=(1 2 3)`
- Elements can be set using square bracket notation, e.g. `arr[0]=$x`, and can use variables for indices, e.g. `arr[$i]=$x`
- Look up elements using syntax `${arr[$i]}`
- To get the size (num elements) of an array, use `${#arr[@]}`
- To get all the array elements (e.g. to copy an array) use the syntax `${arr[@]}`

Iteration example, C style

- Create and iterate through an array, C style

```
arr=(10 20 hello 30)
```

```
size=${#arr[@]}
```

```
for (( i=0; i<$size; i++ )) ; do
```

```
    elem=${arr[$i]}
```

```
    Echo "array element $i is $elem"
```

```
done
```

Iteration example, “in” style

- Can also use for ... in to iterate through elements, e.g.
for val in “\${arr[@]}”; do
 echo “\$val”
done
- Can delete elements or entire array using unset, e.g.
unset(arr[3]), unset(arr), etc