

Arrays & strings

① Arrays

└→ 1-dimensional array

Arrays

Collection of similar data type

why

↳ inconvenient to give each one
a unique variable name

↳ print no. above average & below
average — standard deviation

Definition

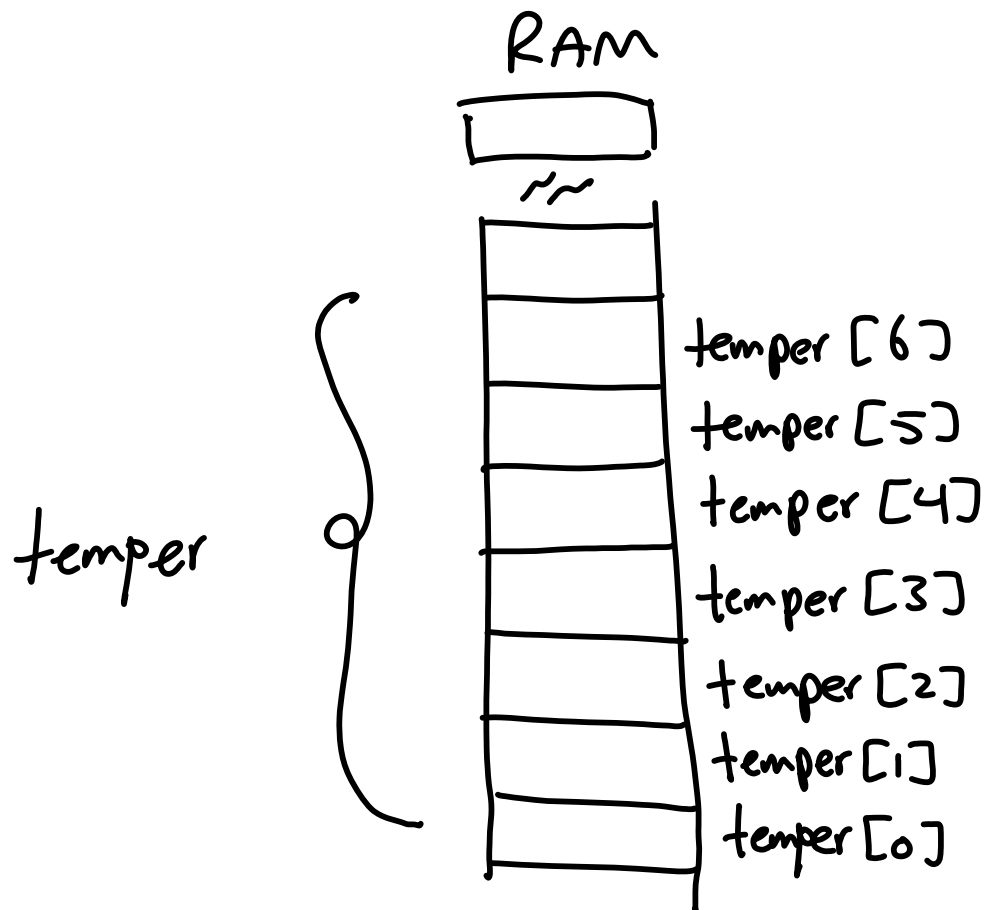
int ▽ temper [7]

data type

name of array

no. of element in array

brackets signal an array



Ex average of week temperature

```
main ( )
```

```
{
```

```
    float temp[7];
```

```
    float sum = 0;
```

```
    int i;
```

```
    for ( i = 0 ; i < 7 ; i++ )
```

```
    {
```

```
        printf ( "\n Day temperature : " );
```

```
        scanf ( "%f", &temp[i] );
```

```
        sum = sum + temp[i];
```

```
    }
```

```
    printf ( "average = %f", sum/7 );
```

```
}
```

Note

The first element in an array is numbered 0, so the last element is 1 less than the size of the array

unknown number of element

```
float temper[5];
```

```
do
```

```
{
```

```
    printf("\n Day temperature: ");
```

```
    scanf("%f", &temper[i]);
```

```
}
```

```
while (temper[i++] > 0)
```

C does not warn you when an array subscript exceeds the size of the array

Initialize arrays

```
# define LIM 6
```

```
int xx[LIM] = {100, 50, 20, 10, 5, 1};
```

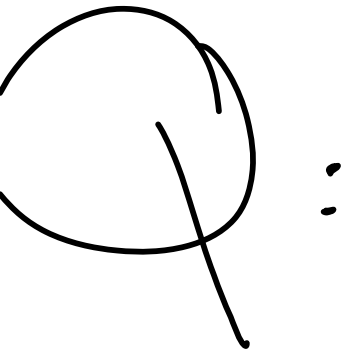
```
main ( )  
{  
    _____  
    _____  
    _____  
    _____  
}
```

You may be wondering why we put
the array declaration outside of the main

- external

You can't initialize a local (automatic)
array

- external
- static



What will be the initial values
of array elements if they are
not initialized