



# ARRAYS AND FUNCTIONS

Array Arguments and Return Values



# ONE-DIMENSIONAL ARRAY ARGUMENT

- **Function Definition:** `int test[10];`
- **Function Call:** `func1(test);`
- **Possible arguments:**
  - `void func1(int* student)`
  - `void func1(int student[])`
  - `void func1(int student[10])`
- **Parameter access in the function:** `student[7]`



## TWO-DIMENSIONAL ARRAY ARGUMENT

- **Function Definition:** `float test_score[10][4];`
- **Function Call:** `func2(test_score);`
- **Possible arguments:**
  - `void func2(float scores[][4])`
  - `void func2(float scores[10][4])`
- **Parameter access in the function:** `scores[6][2]`



## THREE-DIMENSIONAL ARRAY ARGUMENT

- **Function Definition:** `double class_score[5][5][5];`
- **Function Call:** `func3(class_score);`
- **Possible arguments:**
  - `void func3(double scores[][5][5])`
  - `void func3(double scores[5][5][5])`
- **Parameter access in the function:** `scores[1][2][3]`

## RETURNING A ONE-DIMENSIONAL ARRAY

```
int* get_scores()  
{  
    int scores[100];  
    . . .  
    return scores;  
}
```

```
int* get_scores()  
{  
    static int scores[100];  
    . . .  
    return scores;  
}
```

```
int* get_scores()  
{  
    int* scores = new int[100];  
    . . .  
    return scores;  
}
```

```
int* get_scores(int* scores)  
{  
    . . .  
    return scores;  
}
```