

HIGH-LEVEL PROGRAMMING I

typedef

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Introduction

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- `typedef` introduces new name for *existing* type
 - ▣ Doesn't define variable
 - ▣ Doesn't declare new types
 - ▣ Just new name for existing type!!!
- Only purpose is to allow you to replace complex type name with simpler mnemonic

Syntax

any standard or derived type

`typedef` *existing-type* IDENTIFIER;

keyword

*mnemonic traditionally
in uppercase*

Examples (1 / 4)

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```
typedef long int BIGINT;  
BIGINT big_val = 0xabcdef1298765432;
```

```
typedef unsigned int BOOLEAN;  
BOOLEAN const True = 1;  
BOOLEAN const False = 0;  
BOOLEAN flag = True;
```

Examples (2/4)

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```
typedef char* STRING;  
  
STRING names[3];  
  
names[0] = "Clint";  
names[1] = "Eastwood";
```

Examples (3/4)

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```
// in header file
struct date_tag {
    int day;
    int month;
    int year;
};
typedef struct date_tag DATE;
typedef DATE* DATEPTR;

// in source file
DATE bday = {25, 12, 2019};
```

Examples (4/4)

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```
// in header file
typedef struct {
    int day;
    int month;
    int year;
} DATE;
typedef DATE * DATEPTR;

// in source file
DATE bday = {25, 12, 2019};
```