

Defining Custom Data Types

Defining Custom Data Types

- The C keyword `typedef` provides a way to create a shorthand or rewritten name for data types.
- The basic idea is to first define a type in the normal way, then alias it to something else.

Defining Custom Data Types

```
typedef <old name> <new name>;
```

Defining Custom Data Types

```
typedef unsigned char byte;
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```
typedef char* string;
```


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- Using `typedef` becomes really useful with structures, which otherwise have a type name comprised of two words – the keyword `struct` as well as the unique name you've chosen to associate with your type.

Defining Custom Data Types

```
struct car
{
    int year;
    char model[10];
    char plate[7];
    int odometer;
    double engine_size;
};

typedef struct car car_t;
```

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    int year;
    char model[10];
    char plate[7];
    int odometer;
    double engine_size;
}
car_t;
```

Defining Custom Data Types

```
// variable declaration
```

```
struct car mycar;
```

```
// field accessing
```

```
mycar.year = 2011;
```

```
mycar.plate = "CS50";
```

```
mycar.odometer = 50505;
```

Defining Custom Data Types

```
// variable declaration
```

```
struct car mycar;
```

```
// field accessing
```

```
mycar.year = 2011;
```

```
mycar.plate = "CS50";
```

```
mycar.odometer = 50505;
```


Defining Custom Data Types

```
// variable declaration  
car_t mycar;
```

```
// field accessing  
mycar.year = 2011;  
mycar.plate = "CS50";  
mycar.odometer = 50505;
```