



Defining the Grid

Define explicit tracks (rows/cols) for your layout.

- EXPLICIT COLUMNS

```
grid-template-columns: repeat(3, 1fr);
```

EXPLICIT ROWS

```
grid-template-rows: repeat(2, 50px);
```

SHORTHAND (ROWS / COLS)

```
grid-template: 50px 50px / 1fr 1fr;
```



Placing Items

Position items on specific grid lines.

- **SHORTHAND (START / END)**

```
grid-column: 1 / 3;
```

SPAN KEYWORD

```
grid-column: 2 / span 2;
```

FULL WIDTH (NEGATIVE INDEX)

```
grid-column: 1 / -1;
```

SPECIFIC LINE

```
grid-column-start: 2;
```



Layout Systems & Units

The `fr` unit and the 12-column standard.

- 12-COLUMN SYSTEM

```
grid-template-columns: repeat(12, 1fr);
```

FRACTIONAL UNIT

```
grid-template-columns: 1fr 4fr;
```

PLACING ON 12-COL

```
grid-column: 2 / -1; /* Sidebar to End */
```



Areas & Implicit Names

Visual mapping with ASCII-style layout.

- **VISUAL MAP**

```
grid-template-areas:  
". h h h ."  
". c c c .";
```

ASSIGN TO AREA

```
grid-area: h; /* Header */
```

IMPLICIT NAMES

```
grid-area: content; /* If lines are named */
```



Responsive & Implicit Magic

Auto-placement and the RAM pattern.

- THE RAM PATTERN (RESPONSIVE AUTO MAX)

```
repeat(auto-fit, minmax(100px, 1fr));
```

IMPLICIT ROW HEIGHT

```
grid-auto-rows: 100px;
```

FILL HOLES

```
grid-auto-flow: dense;
```



Best Practices

Why Grid matters and common mistakes.

- KEY BENEFIT

```
/* RAM Pattern reduces Media Queries */
```

VISUAL CLARITY

```
/* Use Template Areas for readability */
```

THE -1 TRAP

```
/* -1 only works on Explicit grids */
```

FULL BLEED

```
grid-column: 1 / -1;
```