**# Angular Flex-Layout Cheat Sheet**

**@angular/flex-layout** (also known as **ngx-flex**) is a powerful library that provides a declarative, responsive layout system using Flexbox and CSS Grid in Angular applications.

## **1. Installation**

To install Angular Flex-Layout, run the following command:

npm install @angular/flex-layout @angular/cdk

Then, import it into app.module.ts:

import { FlexLayoutModule } from '@angular/flex-layout';

@NgModule({

imports: [FlexLayoutModule],

})

export class AppModule {}

## **2. Core Directives**

### **Container & Items**

| **Directive** | **Description** | **Example** |
| --- | --- | --- |
| fxLayout="row" | Arranges items in a row (default: left-to-right) | <div fxLayout="row"> |
| fxLayout="column" | Arranges items in a column (top-to-bottom) | <div fxLayout="column"> |
| fxLayoutAlign="start center" | Aligns children (horizontal start, vertical center) | <div fxLayoutAlign="center center"> |
| fxFlex | Makes item flexible within container | <div fxFlex>Auto Grow</div> |
| fxFlex="50%" | Assigns 50% width | <div fxFlex="50%">Half Width</div> |
| fxFlex="100px" | Fixed size (100px width) | <div fxFlex="100px">Fixed</div> |
| fxFlexOffset="10px" | Offsets item by 10px | <div fxFlexOffset="10px">Offset</div> |
| fxLayoutGap="10px" | Adds space between children | <div fxLayoutGap="10px"> |

## **3. Responsive API**

Flex Layout provides built-in responsive breakpoints:

| **Breakpoint** | **Size** |
| --- | --- |
| xs | < 600px |
| sm | 600px - 960px |
| md | 960px - 1280px |
| lg | 1280px - 1920px |
| xl | > 1920px |
| lt-md | Less than 960px |
| gt-sm | Greater than 600px |

### **Example Usage:**

<div fxLayout="row" fxLayout.lt-sm="column">

<div fxFlex="50%" fxFlex.lt-md="100%">Item 1</div>

<div fxFlex="50%" fxFlex.lt-md="100%">Item 2</div>

</div>

✔️ Changes to column layout on small screens (lt-sm)  
 ✔️ Each item takes full width on medium screens (lt-md)

## **4. Alignment & Justification**

| **Directive** | **Description** | **Example** |
| --- | --- | --- |
| fxLayoutAlign="start" | Aligns items to the start | <div fxLayoutAlign="start"> |
| fxLayoutAlign="center" | Centers items | <div fxLayoutAlign="center"> |
| fxLayoutAlign="end" | Aligns items to the end | <div fxLayoutAlign="end"> |
| fxLayoutAlign="space-around" | Distributes items evenly with space around | <div fxLayoutAlign="space-around"> |
| fxLayoutAlign="space-between" | Distributes items with equal space | <div fxLayoutAlign="space-between"> |

## **5. Flex Utility Classes**

| **Class** | **Effect** |
| --- | --- |
| fxFill | Fills available width & height |
| fxShow / fxHide | Show/Hide element |
| fxShow.lt-md="false" | Hide element on small screens |
| fxHide.gt-sm="true" | Hide element on larger screens |

### **Example: Show/Hide Responsively**

<div fxShow fxShow.lt-md="false">Visible on large screens</div>

<div fxHide fxShow.lt-md="true">Visible on small screens</div>

## **6. Nested Layouts**

<div fxLayout="row">

<div fxFlex="70%" fxLayout="column">

<div fxFlex="50%">Left - Top</div>

<div fxFlex="50%">Left - Bottom</div>

</div>

<div fxFlex="30%">Right</div>

</div>

## **7. Responsive Grid Example**

<div fxLayout="row wrap" fxLayoutAlign="center">

<div fxFlex="30%" fxFlex.lt-md="45%" fxFlex.lt-sm="100%">Item 1</div>

<div fxFlex="30%" fxFlex.lt-md="45%" fxFlex.lt-sm="100%">Item 2</div>

<div fxFlex="30%" fxFlex.lt-md="45%" fxFlex.lt-sm="100%">Item 3</div>

</div>

✔️ Uses wrap to prevent overflow  
 ✔️ Each item takes 45% on medium and 100% on small screens

## **8. Custom Breakpoints (Advanced)**

Define custom breakpoints in app.module.ts:

import { BREAKPOINT } from '@angular/flex-layout';

const CUSTOM\_BREAKPOINTS = [

{

alias: 'xs-landscape',

mediaQuery: 'screen and (max-width: 600px) and (orientation: landscape)',

overlapping: false

}

];

@NgModule({

providers: [{ provide: BREAKPOINT, useValue: CUSTOM\_BREAKPOINTS, multi: true }],

})

export class AppModule {}

Use in HTML:

<div fxFlex.xs-landscape="100%">Landscape Mode</div>

## **9. Debugging Layouts**

Use the fxDebug directive to print layout info in the console:

<div fxLayout="row" fxDebug>Debug Mode</div>

# **Final Thoughts**

This cheat sheet provides a **quick reference** to **ngx-flex** directives, responsive utilities, and common layout patterns. Let me know if you need more examples! 🚀