

NEW DATA TYPES - VECTORS

- $\{\epsilon \text{ b d i u}\}\text{vec}\{2 \ 3 \ 4\}$
- ‘bool’ ‘double’ ‘integer’ ‘unsigned integer’
- $\{2 \ 3 \ 4\}$: number of components
- Examples
 - **vec2**: two float components
 - **dvec4**: four double components
 - ...

```
vec4 pos = vec4(1, 2, 3, 4);
```

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- Swizzling
 - Implemented in hardware -> almost free
- Three identical variants of accessing components as long as sets are not mixed
 - xyzw
 - rgba
 - stpq

```
vec4 pos = vec4(1, 2, 3, 4);  
float c1 = pos.x;  
float c2 = pos.w;  
vec2 c3 = pos.xy;  
vec2 c4 = pos.xz;  
vec4 c5 = pos.wyzx;  
vec4 c6 = pos.zzxx;
```