```
/*-----
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      import 'vs/css!./linesDecorations';
       import { DecorationToRender, DedupOverlay } from 'vs/editor/browser/viewParts/glyphMargin/glyphMargin';
 8
       import { RenderingContext } from 'vs/editor/browser/view/renderingContext';
       import { ViewContext } from 'vs/editor/common/viewModel/viewContext';
 9
       import * as viewEvents from 'vs/editor/common/viewEvents';
10
       import { EditorOption } from 'vs/editor/common/config/editorOptions';
12
13
14
       export class LinesDecorationsOverlay extends DedupOverlay {
15
16
           private readonly _context: ViewContext;
          private _decorationsLeft: number;
18
19
           private _decorationsWidth: number;
20
          private _renderResult: string[] | null;
21
22
          constructor(context: ViewContext) {
23
              super();
              this._context = context;
24
25
              const options = this._context.configuration.options;
26
              const layoutInfo = options.get(EditorOption.layoutInfo);
27
              this._decorationsLeft = layoutInfo.decorationsLeft;
28
              this._decorationsWidth = layoutInfo.decorationsWidth;
29
              this._renderResult = null;
30
              this._context.addEventHandler(this);
31
32
33
          public override dispose(): void {
34
              this._context.removeEventHandler(this);
35
              this._renderResult = null;
36
              super.dispose();
37
           }
38
39
          // --- begin event handlers
40
41
          public override onConfigurationChanged(e: viewEvents.ViewConfigurationChangedEvent): boolean {
42
              const options = this._context.configuration.options;
43
              const layoutInfo = options.get(EditorOption.layoutInfo);
              this._decorationsLeft = layoutInfo.decorationsLeft;
44
45
              this._decorationsWidth = layoutInfo.decorationsWidth;
46
              return true;
47
48
          \verb|public| override| on Decorations Changed (e: view Events. View Decorations Changed Event): boolean \{ (e: view Events. View Decorations Changed Event): boolean \{ (e: view Events. View Decorations Changed Event): boolean \{ (e: view Events. View Decorations Changed Event): boolean \{ (e: view Events. View Decorations Changed Event): boolean \{ (e: view Events. View Decorations Changed Event): boolean \{ (e: view Events. View Decorations Changed Event): boolean \{ (e: view Events. View Decorations Changed Event): boolean \{ (e: view Events. View Decorations Changed Event): boolean \{ (e: view Events. View Decorations Changed Event): boolean \{ (e: view Events. View Decorations Changed Event): boolean \{ (e: view Events. View Decorations Changed Event): boolean \{ (e: view Events. View Decorations Changed Event): boolean \{ (e: view Events. View Decorations Changed Events. View Events. View Decorations Changed Events. View Ev
49
              return true;
50
51
           public override onFlushed(e: viewEvents.ViewFlushedEvent): boolean {
52
53
54
          public override onLinesChanged(e: viewEvents.ViewLinesChangedEvent): boolean {
55
              return true;
56
57
          public override onLinesDeleted(e: viewEvents.ViewLinesDeletedEvent): boolean {
58
              return true;
59
60
           public override onLinesInserted(e: viewEvents.ViewLinesInsertedEvent): boolean {
61
              return true:
62
          public override onScrollChanged(e: viewEvents.ViewScrollChangedEvent): boolean {
63
64
              return e.scrollTopChanged;
65
           public override onZonesChanged(e: viewEvents.ViewZonesChangedEvent): boolean {
66
              return true;
```

```
68
  69
  70
              // --- end event handlers
  71
  72
              protected _getDecorations(ctx: RenderingContext): DecorationToRender[] {
  73
                  const decorations = ctx.getDecorationsInViewport();
  74
                  const r: DecorationToRender[] = [];
  75
                  let rLen = 0;
  76
                  for (let i = 0, len = decorations.length; i < len; i++) {
  77
                      const d = decorations[i];
  78
                      const linesDecorationsClassName = d.options.linesDecorationsClassName;
  79
                      const zIndex = d.options.zIndex;
                      if (linesDecorationsClassName) {
  81
                          r[rLen++] = new DecorationToRender(d.range.startLineNumber, d.range.endLineNumber, linesDecorationsClassName, zIndex);
                      }
  83
                      const firstLineDecorationClassName = d.options.firstLineDecorationClassName;
                      if (firstLineDecorationClassName) {
  85
                          r[rLen++] = new DecorationToRender(d.range.startLineNumber, d.range.startLineNumber, firstLineDecorationClassName, zInchenter (d.range.startLineNumber) and the startLineNumber (d.range.startLineNumber (d.range.startLineNumber) and the startLineNumber (d.range.startLineNumber (d.range.startLine
  86
  87
                 }
  88
                      return r;
  89
              }
  90
  91
              public prepareRender(ctx: RenderingContext): void {
  92
                  const visibleStartLineNumber = ctx.visibleRange.startLineNumber;
  93
                  const visibleEndLineNumber = ctx.visibleRange.endLineNumber;
  94
                  const toRender = this._render(visibleStartLineNumber, visibleEndLineNumber, this._getDecorations(ctx));
  95
  96
                  const left = this._decorationsLeft.toString();
  97
                  const width = this._decorationsWidth.toString();
                  const common = '" style="left:' + left + 'px;width:' + width + 'px;"></div>';
  98
  99
100
                  const output: string[] = [];
101
                  for (let lineNumber = visibleStartLineNumber; lineNumber <= visibleEndLineNumber; lineNumber++) {</pre>
102
                      const lineIndex = lineNumber - visibleStartLineNumber;
103
                      const decorations = toRender[lineIndex].getDecorations();
104
                      let lineOutput = '';
105
                      for (const decoration of decorations) {
                          lineOutput += '<div class="cldr ' + decoration.className + common;</pre>
106
107
108
                      output[lineIndex] = lineOutput;
109
110
111
                  this._renderResult = output;
112
              }
113
114
              public render(startLineNumber: number, lineNumber: number): string {
115
                  if (!this._renderResult) {
116
                      return '';
117
                 }
118
                      return this._renderResult[lineNumber - startLineNumber];
119
              }
120 }
121
```