

# Selecciones y *join* de datos en D3.js

**IIC2026 2020-2**

# *Join* de datos en D3.js I

Selecciones y *join* de datos en D3.js

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## Vincular datos con elementos

## Vincular datos con elementos

Podemos generar un vínculo de marcas y canales con datos mediante código.

```
<svg>  
  <rect></rect>  
  <circle></circle>  
  <path></path>  
</svg>
```

```
<svg>  
  <rect></rect>  
  <circle></circle>  
  <path></path>  
</svg>
```

```
const datos = [23, 45, 120, 64];
```

```
<svg>
  <rect></rect>
  <circle></circle>
  <path></path>
</svg>
```

```
const datos = [
  {nombre: "Ana", edad: 23},
  {nombre: "Bea", edad: 44},
  ...
];
```

```
<svg id="svg" width="400" height="250">  
  <rect></rect>  
  <rect></rect>  
  <rect></rect>  
  <rect></rect>  
</svg>
```

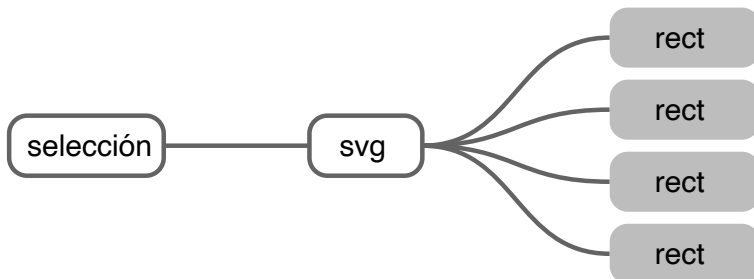


```
<svg id="svg" width="400" height="250">  
  <rect></rect>  
  <rect></rect>  
  <rect></rect>  
  <rect></rect>  
</svg>
```

```
d3.select("#svg")  
  .selectAll("rect");
```

```
<svg id="svg" width="400" height="250">  
  <rect></rect>  
  <rect></rect>  
  <rect></rect>  
  <rect></rect>  
</svg>
```

```
d3.select("#svg")  
  .selectAll("rect");
```



## seleccion.data

```
1 const datos = [23, 45, 120, 64];  
2  
3 d3.select("#svg")  
4   .selectAll("rect")  
5   .data(datos);
```

## seleccion.data

```
1 const datos = [23, 45, 120, 64];  
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3 d3.select("#svg")  
4   .selectAll("rect")  
5   .data(datos);
```

- Hay datos que no se le asocian elementos
- Hay elementos y datos que se asocian entre ellos
- Hay elementos que no se le asocian datos

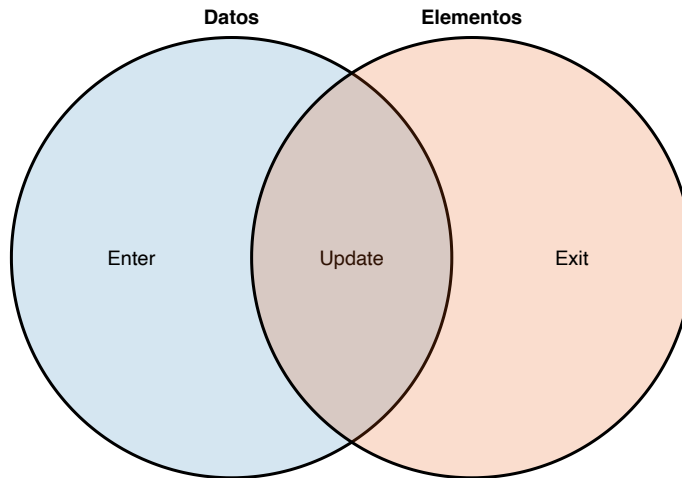
## seleccion.data

```
1 const datos = [23, 45, 120, 64];  
2  
3 d3.select("#svg")  
4   .selectAll("rect")  
5   .data(datos);
```

- Hay datos que no se le asocian elementos → *enter*
- Hay elementos y datos que se asocian entre ellos → *update*
- Hay elementos que no se le asocian datos → *exit*

# seleccion.data

- Hay datos que no se le asocian elementos ➡ *enter*
- Hay elementos y datos que se asocian entre ellos ➡ *update*
- Hay elementos que no se le asocian datos ➡ *exit*



## Update

```
1 const datos = [23, 45, 120, 64];
2
3 d3.select("#svg")
4   .selectAll("rect")
5   .data(datos);
```

```
<svg id="svg" width="400" height="250">
  <rect></rect> <!-- 23 -->
  <rect></rect> <!-- 45 -->
  <rect></rect> <!-- 120 -->
  <rect></rect> <!-- 64 -->
</svg>
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## Update

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1 const datos = [23, 45, 120, 64];  
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<svg id="svg" width="400" height="250">  
  <rect></rect> <!-- 23 -->  
  <rect></rect> <!-- 45 -->  
  <rect></rect> <!-- 120 -->  
  <rect></rect> <!-- 64 -->  
</svg>
```



## Update

```
1 const datos = [23, 45, 120, 64];
2
3 const update = d3.select("#svg")
4   .selectAll("rect")
5   .data(datos);
6
7 update.attr("width", 50)
8   .attr("y", 0)
9   .attr("x", (d, i, all) => i * 100);
```

```
<svg id="svg" width="400" height="250">
  <rect></rect> <!-- 23 -->
  <rect></rect> <!-- 45 -->
  <rect></rect> <!-- 120 -->
  <rect></rect> <!-- 64 -->
</svg>
```

## Update

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8   .attr("y", 0)
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```

```
<svg id="svg" width="400" height="250">
  <rect width="50" y="0" x="0"></rect> <!-- 23 -->
  <rect width="50" y="0" x="100"></rect> <!-- 45 -->
  <rect width="50" y="0" x="200"></rect> <!-- 120 -->
  <rect width="50" y="0" x="300"></rect> <!-- 64 -->
</svg>
```

## Update

```
1  const datos = [23, 45, 120, 64];
2
3  const update = d3.select("#svg")
4    .selectAll("rect")
5    .data(datos);
6
7  update.attr("width", 50)
8    .attr("y", 0)
9    .attr("x", (d, i, all) => i * 100)
10   .attr("height", (d, i, all) => 2 * d);
```

```
<svg id="svg" width="400" height="250">
  <rect width="50" y="0" x="0"></rect> <!-- 23 -->
  <rect width="50" y="0" x="100"></rect> <!-- 45 -->
  <rect width="50" y="0" x="200"></rect> <!-- 120 -->
  <rect width="50" y="0" x="300"></rect> <!-- 64 -->
</svg>
```

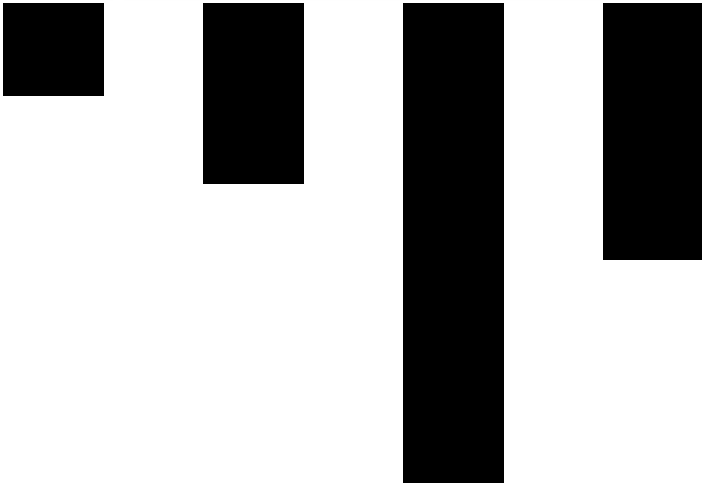
## Update

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1 const datos = [23, 45, 120, 64];
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3 const update = d3.select("#svg")
4   .selectAll("rect")
5   .data(datos);
6
7 update.attr("width", 50)
8   .attr("y", 0)
9   .attr("x", (d, i, all) => i * 100)
10  .attr("height", (d, i, all) => 2 * d);
```

```
<svg id="svg" width="400" height="250">
  <rect width="50" y="0" x="0" height="46"></rect> <!-- 23 -->
  <rect width="50" y="0" x="100" height="90"></rect> <!-- 45 -->
  <rect width="50" y="0" x="200" height="240"></rect> <!-- 120 -->
  <rect width="50" y="0" x="300" height="128"></rect> <!-- 64 -->
</svg>
```

# Update

```
1 const datos = [23, 45, 120, 64];  
2  
3 const update = d3.select("#svg")  
4   .selectAll("rect")  
5   .data(datos);  
6  
7 update.attr("width", 50)  
8   .attr("y", 0)  
9   .attr("x", (d, i, all) => i * 100)  
10  .attr("height", (d, i, all) => 2 * d);
```



## Exit

```
<svg id="svg" width="400" height="250">
  <rect></rect>
  <rect></rect>
  <rect></rect>
  <rect></rect>
</svg>
```

```
1 const datos = [23, 45];
2
3 d3.select("#svg")
4   .selectAll("rect")
5   .data(datos);
```

```
<svg id="svg" width="400" height="250">
  <rect></rect> <!-- 23 -->
  <rect></rect> <!-- 45 -->
  <rect></rect> <!-- ? -->
  <rect></rect> <!-- ? -->
</svg>
```

# Exit

```
<svg id="svg" width="400" height="250">
  <rect></rect>
  <rect></rect>
  <rect></rect>
  <rect></rect>
</svg>
```

```
1 const datos = [23, 45];
2
3 const update = d3.select("#svg")
4   .selectAll("rect")
5   .data(datos);
6
7 update.exit().remove();
```

```
<svg id="svg" width="400" height="250">
  <rect></rect> <!-- 23 -->
  <rect></rect> <!-- 45 -->
  <rect></rect> <!-- ? -->
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## Exit

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  <rect></rect>  
  <rect></rect>  
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<svg id="svg" width="400" height="250">  
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## Enter

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```

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<svg id="svg" width="400" height="250">  
  <!-- ? -->  
</svg>
```

*Enter*

```
<svg id="svg" width="400" height="250">  
</svg>
```

```
1 const datos = [23, 45, 120, 64];  
2  
3 d3.select("#svg")  
4   .selectAll("rect")  
5   .data(datos)  
6   .enter();
```

```
<svg id="svg" width="400" height="250">  
  <!-- ? -->  
</svg>
```

## Enter

```
<svg id="svg" width="400" height="250">  
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```
1 const datos = [23, 45, 120, 64];  
2  
3 d3.select("#svg")  
4   .selectAll("rect")  
5   .data(datos)  
6   .enter()  
7   .append("rect");
```

```
<svg id="svg" width="400" height="250">  
  <!-- ? -->  
</svg>
```

## Enter

```
<svg id="svg" width="400" height="250">
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1 const datos = [23, 45, 120, 64];
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6    .enter()
7    .append("rect")
8    .attr("width", 50)
9    .attr("y", 0)
10   .attr("x", (d, i, all) => i * 100)
11   .attr("height", (d, i, all) => 2 * d);
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  <rect width="50" y="0" x="300" height="128"></rect> <!-- 64 -->
</svg>
```

```
1 const svg = d3.select("body").append("svg");
2
3 const datos = [150, 256, 130, 0, 23, 422, 235];
4
5 svg.attr("width", 50 + datos.length * 100).attr("height", 500);
6
7 svg
8   .selectAll("rect")
9   .data(datos)
10  .enter()
11  .append("rect")
12  .attr("width", 50)
13  .attr("fill", "magenta")
14  .attr("height", (d) => d)
15  .attr("x", (_, i) => 50 + i * 100);
```

```
1 const svg = d3.select("body").append("svg");
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12  .attr("width", 50)
13  .attr("fill", "magenta")
14  .attr("height", (d) => d)
15  .attr("x", (_, i) => 50 + i * 100);
```



```
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7 svg
8   .selectAll("rect")
9   .data(datos)
10  .enter()
11  .append("rect")
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13  .attr("fill", "magenta")
14  .attr("height", (d) => d)
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```

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13  .attr("fill", "magenta")
14  .attr("height", (d) => d)
15  .attr("x", (_, i) => 50 + i * 100);
```

# *Join* de datos en D3.js I

Selecciones y *join* de datos en D3.js

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¡Deja tus preguntas en los comentarios!