Dataprocessing Week 3: Questions

- Explain the difference between the == operator and the === operator.

When using == expressions like 0 == false return true because of automatic type conversion. If you don't want this to happen you can use ===, which means precisely equal to so 0 === false returns false.

- Explain what a closure is. (Note that JavaScript programs use closures very often)

A function that references bindings from local scopes around it. This way you don't have to worry about a lot of bindings and makes sure you can use functions in various ways.

- Explain what higher order functions are.

Functions that operate on other functions, either by taking them as arguments or by returning them.

- Explain what a query selector is and give an example line of JavaScript that uses a query selector.

By using the method .querySelector you can specify which DOM element you want to use. It returns the first element it finds matching the argument.

```
<canvas></canvas>
<script>
  let cx = document.querySelector("canvas").getContext("2d");
  cx.beginPath();
  // center=(50,50) radius=40 angle=0 to 7
  cx.arc(50, 50, 40, 0, 7);
  // center=(150,50) radius=40 angle=0 to ½π
  cx.arc(150, 50, 40, 0, 0.5 * Math.PI);
  cx.stroke();
</script>
```

By using .querySelector("canvas") you create an object operating on the tag canvas. A canvas is a single DOM element that encapsulates a picture. Now if you specify cx, you will be operating on this DOM element.