

Week 8 Quiz

Quiz, 10 questions

10/10 points (100%)

Congratulations! You finished!

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point

1.

Which of these does Vega NOT treat as a database?



The specification of the visualization



The runtime that translates the specification into a web page

**Correct**

Correct! The runtime is a JavaScript program that Vega uses to parse the specification and generate the web page of the visualization it describes.



The web page showing the visualization



The data to be visualized

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2.

Which of these best describes reactive programming?



Values change only in response to discrete events

**Correct**

Correct! Reactive programming is programming in response to events, such that everything is implemented as a callback responding to an event, though the events are not always user initiated, and can include clock ticks or "onload."



Every programming instruction creates a reaction

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Programming where the computer initiates all interaction with the user

Programming that describes what happens instead of how it happens

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3.

Which of the following streams would satisfy the following event grammar?

[click, click] > mousemove



A click, a mousemove, and then another click

**Correct**

Correct! The ">" symbol indicates prefiltering of the mousemove events, that they have to happen between the bracketed events preceding the ">" symbol.



A doubleclick while the mouse is in motion



A mousemove followed by two clicks



Two clicks, then a mousemove

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4.

Which event grammar describes a click on a rectangle whose associated data value X = 1?



rect:click[X == 1]

**Correct**

Correct! The "rect:" predecessor requires the click event to occur on a rectangle, and the bracketed condition successor requires that X equals 1.



[rect]click:X == 1



[X == 1] > rect:click



rect[X == 1]: click

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5.

Which elements of narrative visualization do Vega signals support?

☐ Scenes and scene transitions

☒ Parameters and triggers

**Correct**

Correct! Signals are variables and so are the parameters of a narrative visualization. These signal variables change their value due to events, which matches the definition of a trigger for narrative visualization.

☐ Annotations and annotation templates

☐ Slides and slide templates



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6.

Which is NOT a domain specific language?

☐ Ellipsis

☐ Vega

☐ Vega-Lite

☒ JavaScript

**Correct**

Correct! JavaScript is a general purpose language, though usually deployed in a web browser (or web server).



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7.

Which is the most declarative way to compute the sum of an array?

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Using a sum method for the array

Correct

Correct! This is declarative because we are telling the computer what we want (the sum) and not how to compute it.

- ☐ Using a foreach method of an array, passed with a function that adds the numbers
 - ☐ Writing a while loop to add the numbers together
 - ☐ Writing a for loop to add the numbers together
-

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8.

What is a predicate function?

- ☐ A function that halts execution if a variable is zero
- ☐ A function that begins with a verb
- ☐ A function used to build a more complex function
- ☒ A Boolean (true/false) function

Correct

Correct! A predicate is a Boolean function often used to classify items as possessing an attribute or belonging to a set.

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9.

What are "backing points" used for in Vega-Lite?

- ☐ As the screen positions of the selected marks in a chart
- ☒ As a compact description of user selected data items

Correct

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Correct! The backing points are used to describe user selected data items. They are compact, so that if a range of data items are selected, the backing points can just be the first and last data items of the selected range.

10/10 points (100%)

- ☐ As redundant copies of selected data items to support an undo command
 - ☐ As a complete listing of every user selected data item
-



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point

10.

Narrative data visualization is:

- ☐ Fun
- ☐ Complicated
- ☐ Scenes + Annotations + Parameters + Triggers
- ☒ All of the above

Correct

That's right!

