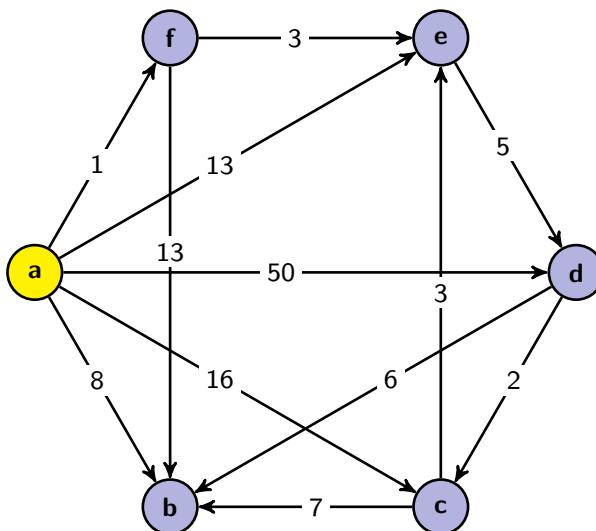


# CSE 332: Data Structures and Parallelism

## QuickCheck: Dijkstra's Algorithm Solutions

### 0. Velociraptors

Consider the following graph:



Suppose that you are at **a** and you are planning your escape from a bunch of hungry velociraptors (edge weights represent the expected number of velociraptors you will meet on this path). Run Dijkstra's Algorithm to find the **lengths** of the shortest paths (fewest number of velociraptors met) from **a** to each of the other vertices. Remember to store the path variable and list the order vertices are added to the known set.

#### Solution:

Vertex	Known	Cost of Path	Path
a	True	0	
b	True	$\infty$ 8	a
c	True	$\infty$ 16 11	a d
d	True	$\infty$ 50 9	a e
e	True	$\infty$ 13 4	a f
f	True	$\infty$ 1	a

Order added to known set: a, f, e, b, d, c

<b>Vertex</b>	<b>Known</b>	<b>Cost of Path</b>	<b>Path</b>
a			
b			
c			
d			
e			
f			

Order added to known set: