**1.**

Time is 0: Regular Passenger arrival, new queue size is 1

Time is 0: Serving Regular Passenger with time stamp 0, service time is 2

Time is 1: Regular Passenger arrival, new queue size is 1

Time is 2: Regular Passenger arrival, new queue size is 2

Time is 2: Serving Regular Passenger with time stamp 1, service time is 1

Time is 3: Frequent Flyer arrival, new queue size is 1

Time is 3: Serving Frequent Flyer with time stamp 3, service time is 3

Time is 6: Serving Regular Passenger with time stamp 2, service time is 1

Time is 7: server is idle

Time is 8: server is idle

Time is 9: server is idle

Time is 10: Regular Passenger arrival, new queue size is 1

Time is 10: Serving Regular Passenger with time stamp 10, service time is 3

Time is 13: server is idle

Time is 14: Regular Passenger arrival, new queue size is 1

Time is 14: Serving Regular Passenger with time stamp 14, service time is 3

Time is 15: Frequent Flyer arrival, new queue size is 1

Time is 16: Frequent Flyer arrival, new queue size is 2

Time is 17: Frequent Flyer arrival, new queue size is 3

Time is 17: Regular Passenger arrival, new queue size is 1

Time is 17: Serving Frequent Flyer with time stamp 15, service time is 3

Time is 18: Regular Passenger arrival, new queue size is 2

Time is 19: Frequent Flyer arrival, new queue size is 3

The number of regular passengers served was 5

with an average waiting time of 1.0

The number of frequent flyers served was 2

with an average waiting time of 1.0

Passengers in frequent flyer queue: 3

Passengers in regular passenger queue: 2

**2.**

Time is 0: server is idle

Time is 1: Regular Passenger arrival, new queue size is 1

Time is 1: Serving Regular Passenger with time stamp 1, service time is 3

Time is 2: Regular Passenger arrival, new queue size is 1

Time is 3: Regular Passenger arrival, new queue size is 2

Time is 4: Serving Regular Passenger with time stamp 2, service time is 4

Time is 5: Regular Passenger arrival, new queue size is 2

Time is 6: Regular Passenger arrival, new queue size is 3

Time is 8: Serving Regular Passenger with time stamp 3, service time is 2

Time is 9: Regular Passenger arrival, new queue size is 3

Time is 10: Frequent Flyer arrival, new queue size is 1

Time is 10: Serving Frequent Flyer with time stamp 10, service time is 4

Time is 11: Regular Passenger arrival, new queue size is 4

Time is 12: Frequent Flyer arrival, new queue size is 1

Time is 12: Regular Passenger arrival, new queue size is 5

Time is 13: Regular Passenger arrival, new queue size is 6

Time is 14: Serving Frequent Flyer with time stamp 12, service time is 3

Time is 16: Frequent Flyer arrival, new queue size is 1

Time is 16: Regular Passenger arrival, new queue size is 7

Time is 17: Frequent Flyer arrival, new queue size is 2

Time is 17: Serving Frequent Flyer with time stamp 16, service time is 2

Time is 18: Regular Passenger arrival, new queue size is 8

Time is 19: Regular Passenger arrival, new queue size is 9

Time is 19: Serving Regular Passenger with time stamp 5, service time is 2

The number of regular passengers served was 4

with an average waiting time of 5.25

The number of frequent flyers served was 3

with an average waiting time of 1.0

Passengers in frequent flyer queue: 1

Passengers in regular passenger queue: 8

**3.**

Time is 0: server is idle

Time is 1: Frequent Flyer arrival, new queue size is 1

Time is 1: Serving Frequent Flyer with time stamp 1, service time is 2

Time is 2: Frequent Flyer arrival, new queue size is 1

Time is 2: Regular Passenger arrival, new queue size is 1

Time is 3: Serving Frequent Flyer with time stamp 2, service time is 1

Time is 4: Serving Regular Passenger with time stamp 2, service time is 1

Time is 5: Regular Passenger arrival, new queue size is 1

Time is 5: Serving Regular Passenger with time stamp 5, service time is 1

Time is 6: Frequent Flyer arrival, new queue size is 1

Time is 6: Regular Passenger arrival, new queue size is 1

Time is 6: Serving Frequent Flyer with time stamp 6, service time is 4

Time is 8: Regular Passenger arrival, new queue size is 2

Time is 10: Frequent Flyer arrival, new queue size is 1

Time is 10: Serving Frequent Flyer with time stamp 10, service time is 2

Time is 12: Serving Regular Passenger with time stamp 6, service time is 1

Time is 13: Regular Passenger arrival, new queue size is 2

Time is 13: Serving Regular Passenger with time stamp 8, service time is 2

Time is 14: Regular Passenger arrival, new queue size is 2

Time is 15: Frequent Flyer arrival, new queue size is 1

Time is 15: Serving Frequent Flyer with time stamp 15, service time is 2

Time is 16: Regular Passenger arrival, new queue size is 3

Time is 17: Regular Passenger arrival, new queue size is 4

Time is 17: Serving Regular Passenger with time stamp 13, service time is 2

Time is 19: Serving Regular Passenger with time stamp 14, service time is 2

The number of regular passengers served was 6

with an average waiting time of 3.6666666666666665

The number of frequent flyers served was 5

with an average waiting time of 0.2

Passengers in frequent flyer queue: 0

Passengers in regular passenger queue: 2

**4.** It would change the result. If two passengers arrived at the same time, the frequent flyer would be added to the queue first, as they are checked first.

