Codio Activity – Producer-Consumer Mechanism

1. How is the queue data structure used to achieve the purpose of the code?

The Queue data structure will store the output from the producer function, before being selected and processed by the consumer function. This queue is a FIFO queue, meaning First in, first out, in other words, the first input added, will be the first taken by the consumer function. Therefore, the values will be processed in the same order by the producer and consumer functions.

2. What is the purpose of q.put(I)?

q.put(i) will add i to the Queue. In this case, the producer is adding 1-100 to the queue in that order.

3. What is achieved by q.get()?

The q.get() function is 'getting' the next value in the q data structure. As stated, since this is a FIFO data structure, it will take the values in the order in which they were added.

4. What functionality is provided by q.join()?

The q.join() function works together with the q.task_done(). When all tasks are done, the program can then proceed.