**Tutorial 4**

**1.**

It is a linear data structure that follows the First In First Out (FIFO) order, just like a regular queue, but with a circular arrangement of elements in memory.

**2.**

Fixed Size

Circular Wraparound

Front and Rear Pointers

Empty and Full Conditions

Enqueue Operation

Dequeue Operation

Efficient Space Utilization

Constant Time Complexity

**3.**

Device Drivers

Data Streaming Systems

Network Packet Buffering

Task Scheduling

Producer-Consumer Problem

Print Spooling

Buffer Management

Keyboard Input Buffer

Message Queues

**4.**

Circular queue in data structure is a linear data structure that follows the FIFO(First in first out) property. In this, the last element is connected to the first element to make a ring.

**5.**

**6.**

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| **Linear queue** | **Circular queue** |
| * Requires More Memory | * Requires Less Memory |
| * Less Efficient | * More Efficient |