OCR Computer Science AS Level
2.3.1 Algorithms for the Main Data Structures

Flashcards

Are stacks FIFO or FILO?

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FILO

Which function adds an item to a stack?

Which function adds an item to a stack?

Push

Which function removes an element from a stack?

Which function removes an element from a stack?

Pop

What is the significance of the back pointer in the array representation of a queue?

What is the significance of the back pointer in the array representation of a queue?

Holds the location of the next **available** space in the queue

Which function returns the item at the front of a queue without removing it?

Which function returns the item at the front of a queue without removing it?

Peek

What is the purpose of the front pointer in the array representation of a queue?

What is the purpose of the front pointer in the array representation of a queue?

Points to the space containing the first item in the queue

What value is the top pointer initialised to in the array representation of a stack?

What value is the top pointer initialised to in the array representation of a stack?

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Give pseudocode for the two functions which add new elements to stacks and queues

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Stacks

```
push(element)
    top += 1
    A[top] = element
```

Queues

```
enqueue(element)
    A[back] = element
    back += 1
```

Which function returns the item at the top of a stack without removing it?

Which function returns the item at the top of a stack without removing it?

Peek