Team Emertxe



Stack - Introduction

- .Linear Data Structure
- •Last in First out (LIFO)





- .Linear Data Structure
- •Last in First out (LIFO)







DVD / CD stand



Data Structure –Stack

Introduction

- Linear Data Structure
- •Last in First out (LIFO)







DVD / CD stand

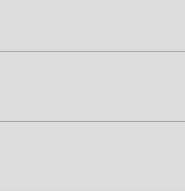
A stack is an ordered list which allow all data operation at one end, called the top.



Stack: Operations



Size = 4



Stack

top

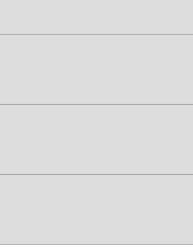


Stack: Operations

Push Operation







top = -1



Data Structure –Stack

Introduction

Stack: Operations

Push Operation

Push(10)

$$Size = 4$$

top = 0

10



Stack: Operations

Push Operation

Size = 4

Push (20)

top = 1

20

10





Stack: Operations

Push Operation

Push (30)

Size = 4

top = 2

30

20

10



Push (40)

Stack: Operations

Push Operation

Size = 4

top = 3

30

20

10



Push (50)

Stack: Operations

Size = 4

Push Operation

top = 3

40

30

20

10

Stack



Stack is full



Stack: Operations

Pop Operation

Size = 4

top = 3

40

30

20

10



Stack: Operations

Pop Operation

Size = 4

40

__

top = 2



Stack: Operations

Pop Operation

Size = 4

40

top = 2

30

20

10



Stack: Operations

Pop Operation

Size = 4

40

30

20

top = 1

10



Stack: Operations

Pop Operation

Size = 4

40

30

20

top = 1

10



Stack: Operations

Push Operation

Push(80)

$$Size = 4$$

40

30

20

top = 1

10



Stack: Operations

Push Operation

Push(80)

$$Size = 4$$

top = 2

30

40

20

10



Stack: Operations

Push Operation

Push(80)

$$Size = 4$$

top = 2

40

80

20

10



Stack: Operations

Push Operation

Push(90)

$$Size = 4$$

top = 2

40

80

20

10



Stack: Operations

Push Operation

Push(90)

$$Size = 4$$

top = 3

40

80

20

10



Stack: Operations

Push Operation

Push(90)

$$Size = 4$$

top = 3

90

80

20

10



Stack: Operations

Peek Operation

Size = 4

top = 3

90

80

20

10



Stack: Operations

Peek Operation

Size = 4

top = 3

80

20

10



Data Structure –Stack

Introduction

.Implementation

- 1. Array
- 2. Linked List

Application



Data Structure –Stack

Introduction

.Implementation

- 1. Array
- 2. Linked List

.Application

- 1. Conversion of Expressions
- 2. Evaluation of Expressions



Stack - Array Implementation