Data Structures
Stack – Array Implementation

Team Emertxe

EMERTXE

Stack – Array Implementation

Data Structure –Stack-Array Implementation

Operations

- Create Stack
- Insert an Element
- Delete an Element
- Print top Element

Stack – create_stack(stack,size)

Data Structure –Stack-Array Implementation

create_stack(stack,size)

```
typedef struct
{
        unsigned int capacity;
        int top;
        int *item;
} stack_t;
```

Data Structure –Stack-Array Implementation

create_stack(stack,size)

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Max Stack size

create_stack(stack,size)

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Max Stack size

Top variable

create_stack(stack,size)

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```

Max Stack size

Top variable

Array holding the stack elements

create_stack(stack,size)

Input Specification:

stack : Pointer that contains address of structure variable (stack_t)

size : Size of array

Output Specification:

Status : e_true / e_false

create_stack(stack,size)

size = 4

```
stack ⟶item = Memalloc(sizeof(int) * size)
If (stack ⟶ item  = NULL)
    return e_false
stack ⟶ capacity = size
stack ⟶  top = -1
return e_true
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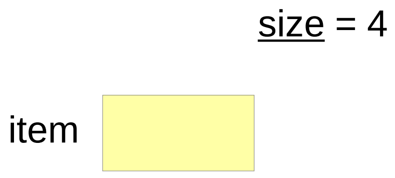

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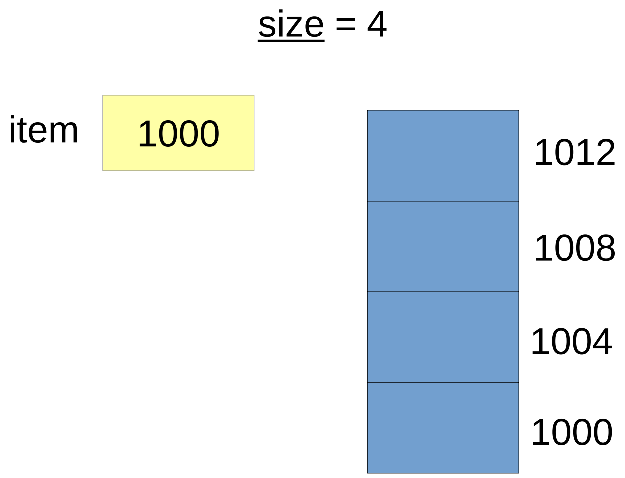

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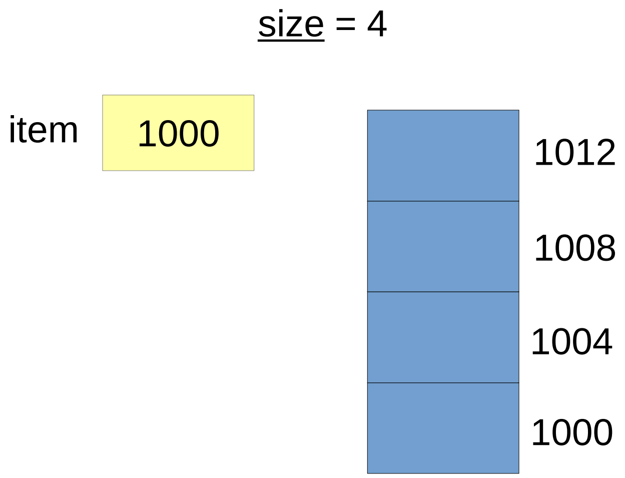

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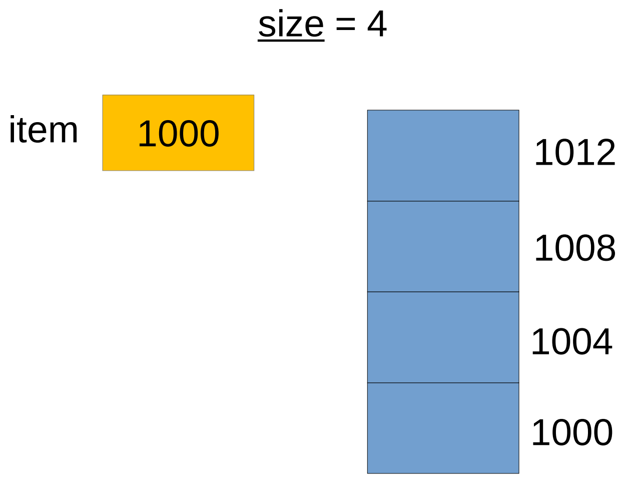

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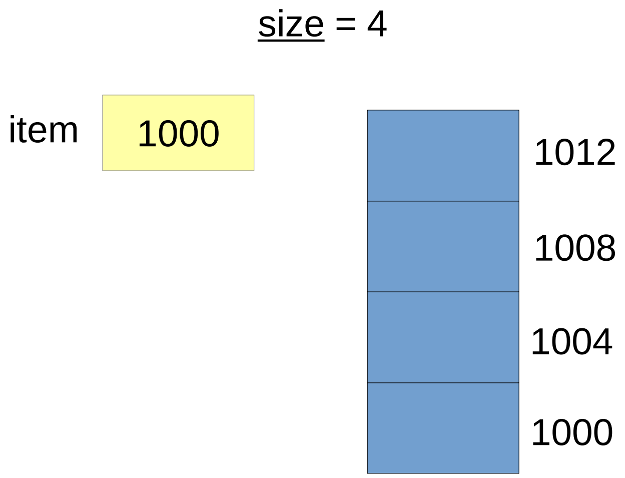

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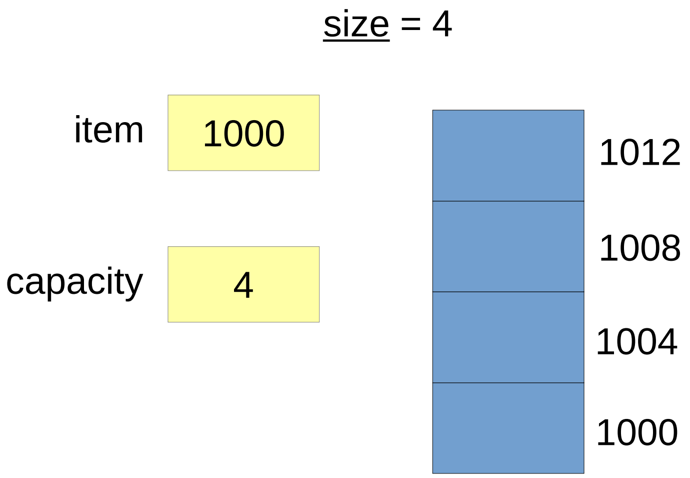

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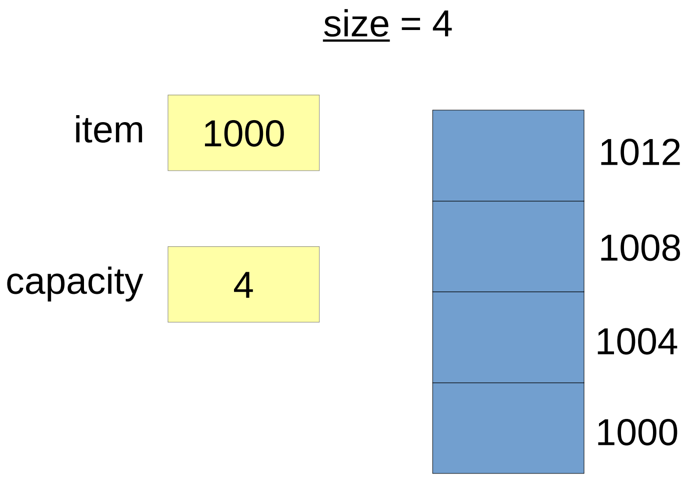

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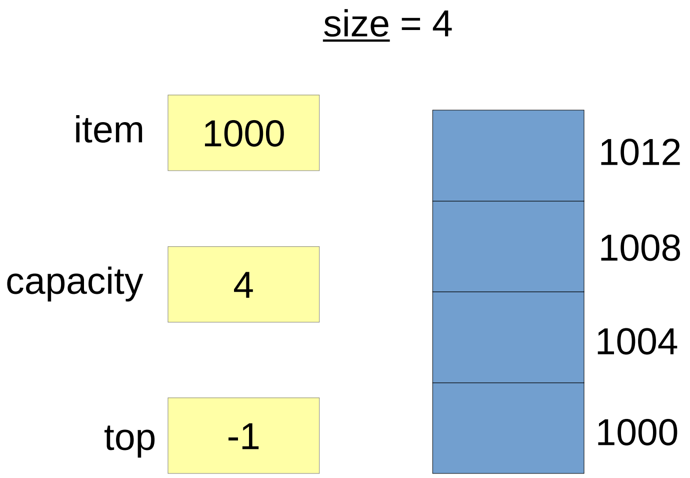

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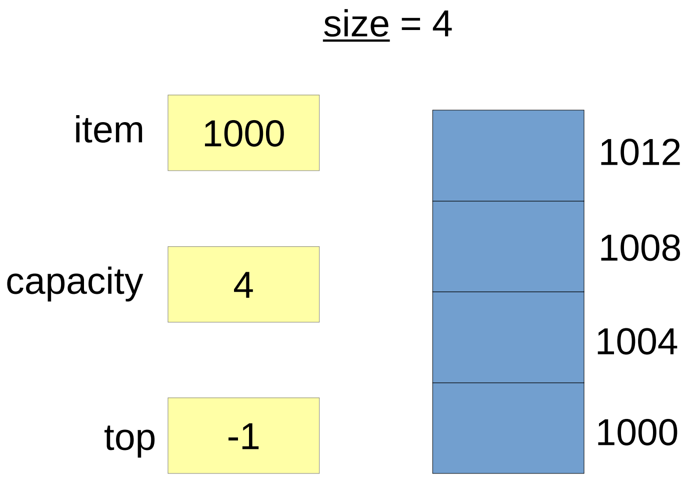

Stack – push(stack, element)