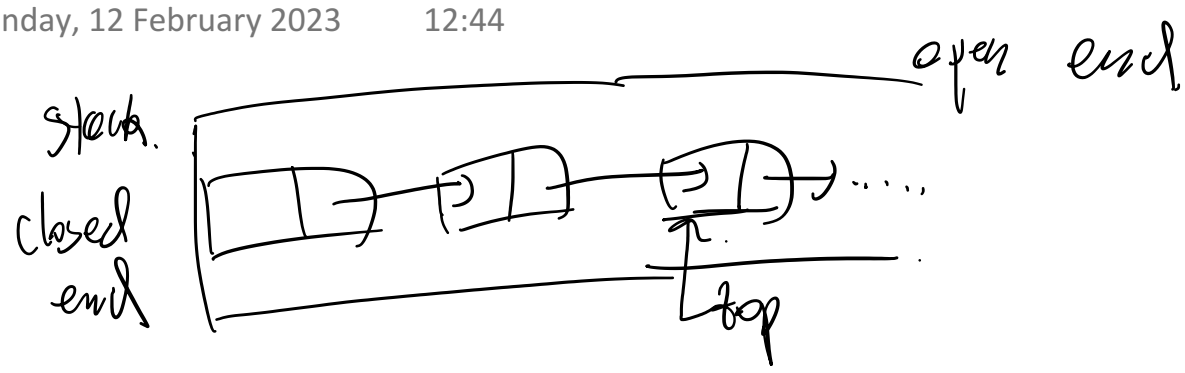
Linked stack

Sunday, 12 February 2023 12:44



exploring Singly-linked-list repn.

In singly-linked-list.

```
typedef struct Node {
    DATA_TYPE data;
    struct node* next;
} Node;
```

In here:

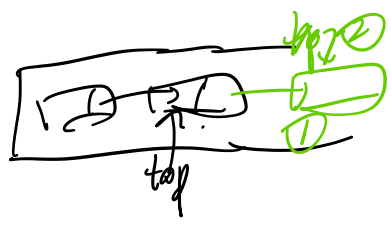
```
typedef struct Stack {
    Node* top; // pointer to the current node
    Node* stack;
} Stack;
```

functions:

① initializeStack( )

```
Stack-> top = NULL;
Stack-> stack = initialize( );
```

② void push (Stack* stack, DATA_TYPE value)



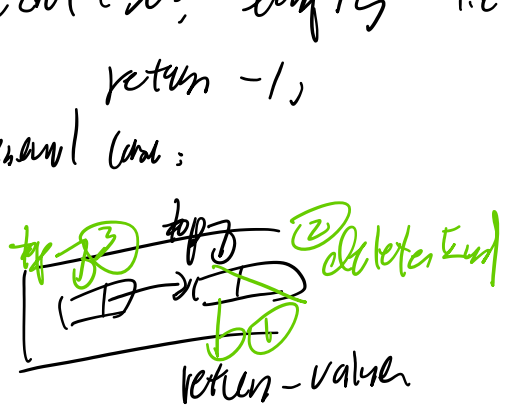

```
Stack-> stack = insertEnd (stack-> stack, value);
```

③ DATA_TYPE pop(Stack* stack)

Special case: empty i.e. isEmpty(stack-> stack)

```
return -1;
```

General case:



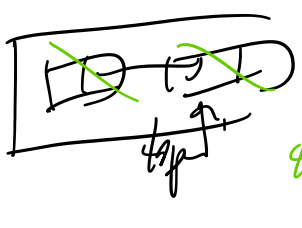
④ peek(stack* stack)

```
if( isEmpty( stack-> stack))
    return -1;
return showEndData( stack-> stack);
```

⑤ display Stack(Stack* stack)

```
displayList( stack-> stack);
```

⑥ delete Stack(Stack* stack) // delete all stack



① deleteAll(stack-> stack)

top = NULL ②