11/12/2020 1BM19CS006

Lab 8 - Stack & Queue using Linked List

```
#include <stdio.h>
#include<stdlib.h>
void push();
void pop();
void display();
struct node {
int data;
struct node * next;
};
struct node *top=NULL;

int main()
{
   int choice;
   do{
   printf("\n1. Push \n2. Pop \n3. Display \n4. Exit");
   printf("Enter your choice: \n");
    scanf("%d", &choice);
   switch(choice)
{
   case 1: push();
       break;
   case 2: pop();
       break;
   case 3: display();
       break;
   case 4: exit(0);
   }
```

```
} while(choice != 4);
  return 0;
  }
void push()
{
 int item;
 struct node *newnode;
 printf("Enter element \n");
 scanf("%d", &item);
 newnode = (struct node*)malloc(sizeof(struct node));
newnode -> data = item;
newnode -> next = NULL;
 if(top == NULL)
    top = newnode;
 else
    newnode -> next = top;
    top = newnode;
  }
void pop()
{
  if (top == NULL)
    printf("Stack is empty \n");
 else
 { printf("Element removed is %d", top -> data);
    top = top -> next;
  }
 }
```

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```
void display()
{
    struct node *temp;
    temp=top;
    if (top==NULL)
    printf("Stack is empty\n");
while (temp!=NULL)
{
    printf("%d\t",temp->data);
    temp=temp->next;
}
}
```