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\\\Created by Ritwik Chandra Pandey on 24/02/21
\\\183215
\\\Stack implementation using Arrays


#include<stdio.h>


int stack[100],choice,n,top,x,i;
void push(void);
void pop(void);
void display(void);
int main()
{

    top=-1;
    printf("\n Enter the size of STACK[MAX=100]:");
    scanf("%d",&n);
    printf("\n\t STACK OPERATIONS USING ARRAY");
    printf("\n\t--------------------------------");

    do
    {printf("\n\t 1.PUSH\n\t 2.POP\n\t 3.DISPLAY\n\t 4.EXIT\t");
       printf("\n Enter the Choice:");
       scanf("%d",&choice);
       switch(choice)
       {
          case 1:
          {
             push();
             break;
          }
          case 2:
          {
             pop();
             break;
          }
```

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            case 3:
            {
                display();
                break;
            }
            case 4:
            {

                break;
            }
            default:
            {
                printf ("\n\t Please Enter a Valid Choice(1/2/3/4)");
            }

        }
    }
    while(choice!=4);
    return 0;
}
void push()
{
    if(top>=n-1)
    {
        printf("\n\tStack is overflow");

    }
    else
    {
        printf(" Enter a value to be pushed:");
        scanf("%d",&x);
        top++;
        stack[top]=x;
    }
}
void pop()
{
```

```
    if(top<0)
    {
        printf("\n\tStack is underflow");
    }
    else
    { int x = stack[top];
        top = top-1;

        printf("\n\t The popped element is %d",x);

    }
}
void display()
{
    if(top>=0)
    {
        printf("\n The elements in stack are : \n”);
        for(i=top; i>=0; i--)
            printf(“%d ",stack[i]);

    }
    else
    {
        printf("\n The stack is empty");
    }

}
```