

Labl.

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```
#include <stdio.h>
```

```
int stack[100], choice, n, top, x, i;
```

```
void push (int, int[]);
```

```
void pop (int[]);
```

```
void display (int[]);
```

```
void main ()
```

```
{  
    top = -1; int a;
```

```
    printf ("\n Enter stack size [MAX=100]: ");
```

```
    scanf ("%d", &n);
```

```

printf("\n\t stack operation with array");
printf("\n\t .....");
printf("\n\t 1. PUSH \n\t 2. POP 3. DISPLAY\n\t 4. EXIT");

```

```

do
{
    printf("\n Enter the Choice:");
    scanf("%d", &choice);
    switch(choice)
    {
        case 1: printf("Enter value to be pushed");
                scanf("%d", &a);
                push(a, stack);
                break;
        case 2: pop(stack); break;
        case 3: display(stack); break;
        case 4: printf("\n\t EXIT"); break;
        default: printf("\n\t Please enter valid choice");
    }
} while (choice != 4);

return 0;

```

```

}

void push (int x, int stack[])
{
    if (top >= n-1)
        printf("OVERFLOW\n");
    else
    {
        top++;
        stack[top] = x;
    }
}

```

```

}

void pop (int stack[])
{
    int p;

```

```
if (top <= -1)
    printf("underflow\n");
else
{
    p = stack[top];
    printf("popped element is: %d\n", p);
    top--;
}
```

}

```
void display (int stack[])
```

```
{
    printf("\n Stack : \n");
    for (i = top; i >= 0; i--)
        printf("%d ", stack[i]);
}
```

}