Push()
Pop()
peek()
isEmpty()

Stack operation with array

```
int max = 100;
int top = -1;
int stack[] = new int[max];
```

→ we can declare on global variable

```
public void push(int value){
    if( top >= max-1){
      Sop("Stack is overflow---");
    }else{
      stack[++top] = value;
      Sop(value + "pushed into the stack");
    }
}
```

stack[top++] = value;

value = 10, 20, 30, 40, 50

++top top++

pre increment post increment

top = top+1 top = top+1, top = -1

-1 → 0 1 stack[top++]

top++ → 0 1 stack[0] = value

0

++top → 0 top = -1 0

max 5

0 = 4 5

top = 4 > max-1

0 1 2 3 4 5

1-1

0 1 2 3 4

Sop(top++); // -1

Sop(++top); 0 1

Sop(top); 0 1

i=5 1-5

i<1 0-1

top = -1

i<=top

0<=top

push

push operation

top=4	50
top=3	40
top=2	30
top=1	20
top=0	10

top=-1

top = 4

```
void printStack(){
  for(int i=0; i<=top; i++){
    Sop(stack[i] + " ");
  }
} o/p o/p 10 20 30 40 50
```

top = 4

top=4	50
top=3	40
top=2	30
top=1	20
top=0	10

top=-1

top--

Pop = 40

UT = 40

Stack = 50

50

-1

0-1 = 4

```
public void pop(){
  if(top < 0){
  Sop("Stack is underflow----");
  }else{
    int value = stack[top--]; top=3
  Sop(value + "popped from the stack");
  }
}
```

top = 4

top value = 50

top=4	50
3	40
2	30
1	20
0	10

top=-1

pop

push

FIFO

LIFO

```
public void peek(){
  if(top<0){
  Sop("Stack is underflow");
  }else{
int value = stack[top];
Sop(value + "peeked from the stack");
}
}
```

Check even or odd number without using conditional statement

```
int number = 12;
String arr[] = {"even","odd"};
Ind index = number%2;
Sop(arr[index]);
```

if ? : 0

13%2 = 0 0 → even or odd

15%2 = 1 0 1

0 → even

1 → odd

2) 0 (0 0

0

2) 0 (0 0

2

0, 2, 4, 6, 8, ---

1, 3, 5, 7, 9 ---

2) 12 (6

12

0