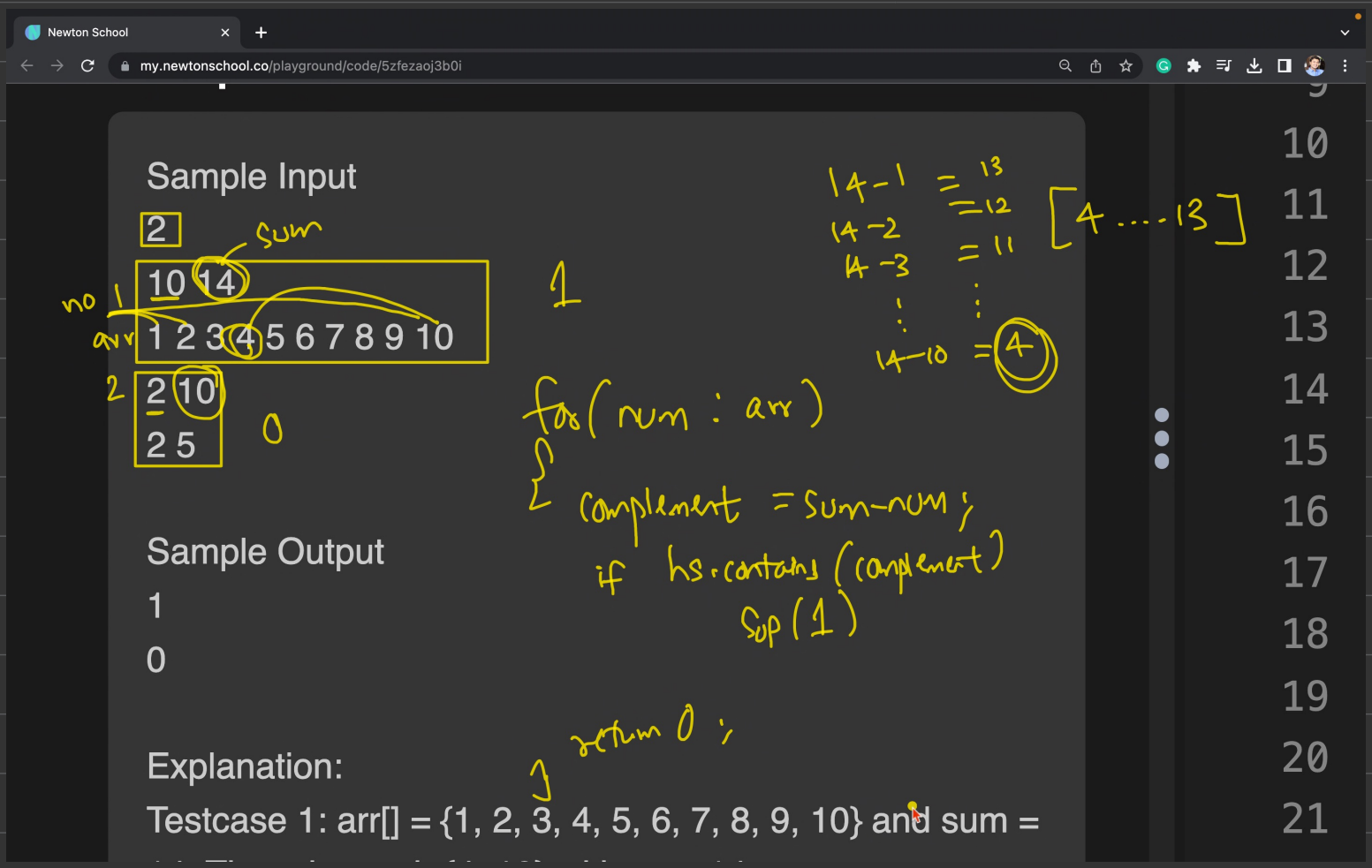
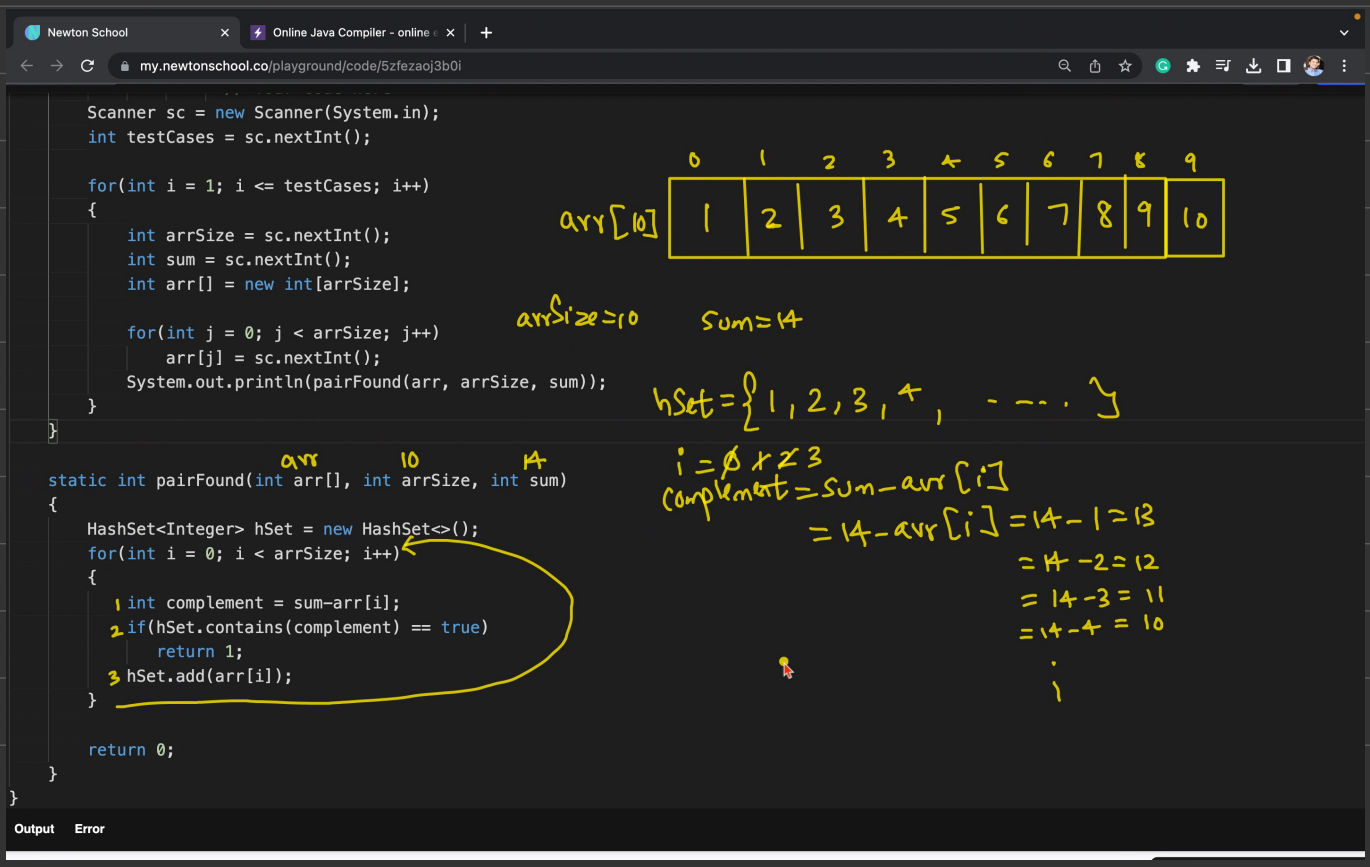
24 June 2023

https://my.newtonschool.co/playground/code/5zfezaoj3b0i



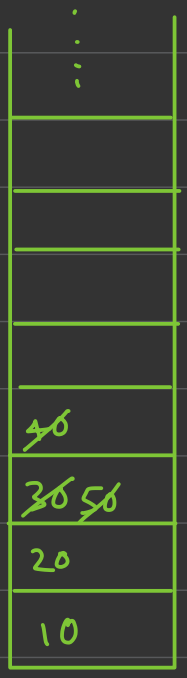


Stack:

Linear Data Structure

LIFO i.e. Last In First Out
or
FILO i.e. First In Last Out

2 Operations:
>Push
>Pop

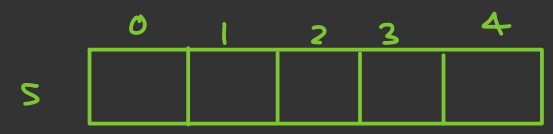


	Push	Pop
1	10	—
2	20	—
3	30	—
4	—	✓
5	50	—
6	40	—
7	Display: 40, 50, 20, 10	
8	—	✓
9	—	✓

Display : 20 , 10

https://yongdanielliang.github.io/animation/web/Stack.html

Stack Operations:



maxSize = 5

Push item = 10

```
if (top == maxSize - 1)
    Sop (Stack full. Cannot push)

top = top + 1                  or    s[++top] = item;
s[top] = item;
```

Pop:

```
if (top == -1)
    Sop (Stack is empty. Cannot pop)
    return -1
else
    return s[top--];
```

Peek:

```
if (top == -1)
    Sop ("empty. Cannot peek")
    return -1
else
    return s[top];
```

Traverse: 40, 30, 20, 10

```
if (top == -1)
    Sop ("stack empty. Cannot traverse")
else
    for(int i=top; i>=0; i--)
        Sop(s[i])
```