```
runs = [0, 1, 99, 98, 76, 54]
#       0. 1. 2.   3.  4.  5

y = runs.pop(3) # pop function returns the deleted element
print(y)
```

```
    98
```

```
print(runs)
```

```
    [0, 1, 99, 76, 54]
```

```
runs.insert(3, 200)
```

```
print(runs)
```

```
    [0, 1, 99, 200, 76, 54]
```

▾ Updating an element in the list

```
runs = [0, 1, 99, 98, 76, 54]
```

```
runs[3] = 200
```

```
print(runs)
```

```
    [0, 1, 99, 200, 76, 54]
```

```
runs[5] = 55
print(runs)
```

```
    [0, 1, 99, 200, 76, 55]
```

▾ Multiple Assignment

```
a, b = 3, 2
```

```
print(a)
print(b)
```

```
    3
```

```
      2
```

```
a = 3
b = 2
print(a)
print(b)
```

```
      3
      2
```

```
runs = [0, 1, 99, 98, 76, 54]
runs[3], runs[5] = 200, 55

print(runs)
```

```
      [0, 1, 99, 200, 76, 55]
```

```
print(type(runs))
```

```
      <class 'list'>
```

Quizzes

```
runs = [0, 1, 99, 98, 76, 54]

runs[3] = runs[4]

# runs[3] = 76

print(runs)
```

```
      [0, 1, 99, 76, 76, 54]
```

Quiz

```
user_values = [3, 5, 9]
user_values[1] = user_values[1] + 1
user_values[2] = user_values[2] + 2
print(user_values)
```

```
      [3, 6, 11]
```

```python
user_values = [1, 6, 8]
user_values[1] = user_values[0]

print(user_values)
```

```
    [1, 1, 8]
```

```python
user_values = [3, 6, 7]
user_values[1] = user_values[2]
user_values[2] = user_values[0]

print(user_values)
```

```python
user_values = [2, 5, 9]
user_values[2] = user_values[2] + 1

print(user_values)
```

```
    [2, 5, 10]
```

▾ Problem Solving

```python
runs = [0, 1, 55, 67, 99, 120, 200, 99]

def search(runs, target = 99):
  for i in range(len(runs)):
    if runs[i] == target:
      print("FOUND")
      return i
  print('Loop is over')
  return "NOT FOUND!"
```

```python
res = search(runs, 99)
print(res)
```

```
    FOUND
    4
```

```python
res = search(runs, 200)
print(res)
```

```
    FOUND
    6
```

```python
res = search(runs, 111)
print(res)
```

```
        Loop is over
        NOT FOUND!
```

Count

```python
runs = [0, 1, 55, 67, 99, 120, 200, 99]

def count_occurrences(runs, target = 99):
  cnt = 0
  for i in range(len(runs)):
    if runs[i] == target:
      cnt += 1
  print('Loop done')
  return cnt
```

```python
res = count_occurrences(runs)
```
```
    Loop done
```

```python
print(res)
```
```
    2
```

Maximum

```python
runs = [0, 99, 1, 99, 23, 99, 98, 100, 200]
```

```python
def find_maximum(my_list):
  # handle the error for empty list
  if len(my_list) == 0:
    return None

  maxi = my_list[0]

  for i in my_list:
    if i > maxi:
```

```
      maxi = i

  return maxi
```

```
res = find_maximum(runs)
print(res)
```

```
    200
```

```
exam_scores = [-100, 0, 200, 300, 255]
```

```
print(find_maximum(exam_scores))
```

```
    300
```

```
empty_list = [] # edge cases, null check
```

```
print(find_maximum(empty_list))
```

```
    None
```

```
print(find_maximum([-1, -2, -5, -3, -4, -5, -6, -7 ,-100]))
```

```
    0
```

▾ Doubts

```
a, b = 3,4
```

```
def find_maximum(my_list):
  if len(my_list) == 0:
    return None
  maxi = my_list[0]
  for i in my_list:
    if i > maxi:
      maxi = i
  return maxi

exam = [100, 0, 200, 300, 255]
print(find_maximum(exam))
```

```
    300
```

```
range?

len?


l = [1, 2, 3, 4, 5]
print(type(l))
```

```
    <class 'list'>
```

```
l = [1, 1, 1, 4, 3]


l[4] = l[3]


print(l)
```

```
    [1, 1, 1, 4, 4]
```

```
print(l[-1])
```

```
    4
```

```
runs = [0, 1, 55, 67, 99, 120, 200, 99]

def search(runs, target = 99):
  for i in range(-1, -len(runs) - 1, -1):
    # print(i)
    if runs[i] == target:
      print("FOUND")
      return i
  print('Loop is over')
  return "NOT FOUND!"



print(search(runs))
```

```
    FOUND
    -1
```

```
print(search(runs, 55))
```

```
    FOUND
    -6
```

```
def create_list():
  d = input()
  x = d.split()
  print(x)
  res=[]
  for i in x:
    res.append(int(i))
```

```
    return res


x = create_list()
print(x)
```

```
    1 2 3 4 5
    ['1', '2', '3', '4', '5']
    [1, 2, 3, 4, 5]
```

```
def f(a, b):
  return a + b

x = f(3, 4)
print(x)
```

```
    7
```

```
c = 3
d = 4

y = f(c, d)
print(y)
```

```
    7
```