

# LAB ACTIVITY 3(iii): Making Decision In Python



## Learning Outcomes:

By the end of this laboratory session, you should be able to:

1. Construct List in simple program

**Hardware/Software:** Computer, Python 3.5 or above.

## Activity 3M

Activity Outcome: List method in Python (method `clear()`)

Procedure:

**Step 1:** Open Code editor and type the code based on the following code :

```
1 buah = ["durian","langsats","manggis","mangga"]
2 print (buah)
3
4 #empty the list
5 buah.clear()
6 print (buah)
```

**Step 2:** Save, compile and run the program. Save the program as `Act3M.py`. Display the output in the area below.

**Output:**

```
['durian', 'langsats', 'manggis', 'mangga']
[]
```

## Activity 3N

Activity Outcome: List method in Python (method **pop()**)

Procedure:

**Step 1:** Open code editor and type the following code:

```
1 food = ["BRIYANI", "SHWARMA", "PASTA"]
2
3 # remove and return the 3rd item
4 return_value = food.pop(2)
5 print('Return Value:', return_value)
6
7 print('Updated List:', food)
```

**Step 2:** Save, compile and run the program. Save the program as `Act3N.py`. Display the output in the area below.

**Output:**

```
Return Value: PASTA
Updated List: ['BRIYANI', 'SHWARMA']
```

## Activity 3O

Activity Outcome : List method in Python (method **remove()**)

Procedures:

**Step 1:** Open code editor and type the following code:

```
1 #dessert list
2 dessert = ['CheeseCake', 'Tart', 'Cookies', 'Puddings']
3 print('Dessert list: ',dessert)
4
5 #remove 'Cookies'
6 dessert.remove('Cookies')
7
8 #update dessert list
9 print('\n*** after remove "Cookies" ***')
10 print('Updated dessert list: ',dessert)
```

**Step 2:** Save, compile and run the program. Save the program as `Act3O.py`. Display the output in the area below..

Output:

```
Dessert list: ['CheeseCake', 'Tart', 'Cookies', 'Puddings']

*** after remove "Cookies" ***
Updated dessert list: ['CheeseCake', 'Tart', 'Puddings']
```

## Activity 3P

Activity Outcome : List method in Python (method **reverse()**)

Procedures:

**Step 1:** Open code editor and type the following code:

```
#OS List
os = ['Windows', 'MacOS', 'Linux', 'Ubuntu', 'Android']
print('Original List:', os)

#reverse method
os.reverse()

#updated list
print('Reverse List:', os)
```

in

Output:

```
Original List: ['Windows', 'MacOS', 'Linux', 'Ubuntu', 'Android']
Reverse List: ['Android', 'Ubuntu', 'Linux', 'MacOS', 'Windows']
```

## Activity 3Q

Activity Outcome: List method in Python (method **sort()**)

Procedures:

**Step 1:** Open code editor and type the following code:

```
1 cars = ["Toyota","BMW","Volvo","Honda","Proton"]
2 print ("Original List = ", cars)
3
4 #sort ascending
5 cars.sort()
6 print ("Sort Ascending = ", cars)
7
8 #sort descending
9 cars.sort(reverse=True)
10 print ("Sort Descending = ",cars)
11
12 #sort by item length
13 cars.sort(key=len)
14 print ("Sort By Length = ",cars)
```

**Step 2:** Save, compile and run the program. Save the program as `Act3Q.py`. Display the output in the area below..

**Output:**

```
Original List= ['Toyota', 'BMW', 'Volvo', 'Honda', 'Proton']
Sort Ascending= ['BMW', 'Honda', 'Proton', 'Toyota', 'Volvo']
Sort Descending = ['Volvo', 'Toyota', 'Proton', 'Honda', 'BMW']
Sort By Length= ['BMW', 'Volvo', 'Honda', 'Toyota', 'Proton']
```

## Activity 3R

Activity Outcome : List method in Python (method **append()**)

Procedures:

**Step 1:** Open code editor and type the following code:

```
1 food = ["BRIYANI","SHWARMA","PASTA"]
2
3 food.append("TACO")
4
5 print('Updated List:', food)|
```

the area below..

**Output:**

```
Updated List: ['BRIYANI', 'SHWARMA', 'PASTA', 'TACO']
```

## Activity 3S

Activity Outcome: List method in Python (method **extend()**)

Procedures:

**Step 1:** Open code editor and type the following code:

```
1  # languages list
2  languages = ['French' , 'English']
3
4  # another list of language
5  languages1 = ['Spanish' , 'Portugese']
6
7  # appending language1 elements to language
8  languages.extend(languages1)
9
10 print('Languages List:', languages)
```

**Step 2:** Save, compile and run the program. Save the program as `Act3S.py`. Display the output in the area below..

**Output:**

```
Languuages List: ['French', 'English', 'Spanish', 'Portugese']
```

## Activity 3T

Activity Outcome: List method in Python (method **insert()**)

Procedures:

**Step 1:** Open code editor and type the following code:

```
list1 = ['a', 'b', 'c', 'd', 'e']  
list1.insert(1, '7')  
print(list1)
```

**Step 2:** Save, compile and run the program. Save the program as `Act3T.py`. Display the output in the area below..

**Output:**

```
['a', '7', 'b', 'c', 'd', 'e']
```

## Activity 3U

Activity Outcome: List method in Python (method **index()**)

Procedures:

**Step 1:** Open code editor and type the following code:

```
1 #create a list
2 alphabet = ['a','e','i','o','i','i','u']
3
4 #search for index 'e' in the list
5 ind = alphabet.index('e')
6 print ("Index of e =" , ind)
7
8 #search for 'i' after index 3
9 ind = alphabet.index('i',3)
10 print ("Index of i =" , ind)
11
12 #search for 'i' between index 3 and 5
13 ind = alphabet.index('i',3,5)
14 print ("Index of i =" , ind)
```

**Step 2:** Save, compile and run the program. Save the program as `Act3U.py`. Display the output in the area below..

**Output:**

```
Index of e = 1
Index of i = 4
Index of i = 4
```



## Activity 3V

Activity Outcome: List method in Python (method **copy()**)

Procedures:

**Step 1:** Open code editor and type the following code:

```
original_list = ["Joni","Narvin"]  
new_list = original_list.copy()  
print("Copy of Original List :",new_list)
```

**Step 2:** Save, compile and run the program. Save the program as `Act3V.py`. Display the output in the area below..

**Output:**

```
Copy of Original List: ['Joni', 'Narvin']
```

## Activity 3W

Activity Outcome: List method in Python (method **count()**)

Procedures:

**Step 1:** Open code editor and type the following code:

```
1  # vowels list
2  vowels = ['a', 'e', 'i', 'o', 'u']
3
4  # count element 'i'
5  count = vowels.count('i')
6
7  # print count
8  print('The count i is:', count)
9
10 # count element 'p'
11 count = vowels.count('p')
12
13 # print count
14 print('The count of p is:', count)
```

**Step 2:** Save, compile and run the program. Save the program as `Act3W.py`. Display the output in the area below..

**Output:**

```
The count i is: 1
The count of p is: 0
```