

Programming Assignment-18

Question 1:

Ans.

```
def filter_list(lst):  
    return [x for x in lst if isinstance(x, int)]
```

Examples

```
print(filter_list([1, 2, "a", "b"])) # → [1, 2]  
print(filter_list([1, "a", "b", 0, 15])) # → [1, 0, 15]  
print(filter_list([1, 2, "aasf", "1", "123", 123])) # → [1, 2, 123]
```

Question 2:

Ans.

```
def reverse(txt):  
    return txt[::-1].swapcase()
```

Examples

```
print(reverse("Hello World")) # → "DLROw OLLEh"  
print(reverse("ReVeRsE")) # → "eSrEvEr"  
print(reverse("Radar")) # → "RADAr"
```

Question 3:

Ans.

```
lst = [1, 2, 3, 4, 5, 6]  
first, *middle, last = lst
```

Outputs

```
print(first) # → 1
```

```
print(middle) # → [2, 3, 4, 5]
```

```
print(last) # → 6
```

Question 4:

Ans.

```
def factorial(n):
```

```
    if n == 0:
```

```
        return 1
```

```
    else:
```

```
        return n * factorial(n - 1)
```

Examples

```
print(factorial(5)) # → 120
```

```
print(factorial(3)) # → 6
```

```
print(factorial(1)) # → 1
```

```
print(factorial(0)) # → 1
```

Question 5:

Ans.

```
def move_to_end(lst, element):
```

```
    return [x for x in lst if x != element] + [x for x in lst if x == element]
```

Examples

```
print(move_to_end([1, 3, 2, 4, 4, 1], 1)) # → [3, 2, 4, 4, 1, 1]
```

```
print(move_to_end([7, 8, 9, 1, 2, 3, 4], 9)) # → [7, 8, 1, 2, 3, 4, 9]
```

```
print(move_to_end(["a", "a", "a", "b"], "a")) # → ["b", "a", "a", "a"]
```