

Name: SRADHA KEDIA

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Question 4:

```
def selectionsorting(p, _list):
```

```
''' name: selectionsorting
    arguments: p, _list
    returns: none
```

```
'''
```

```
if p == len(_list): # checking length of list with p.
    raise Exception ("No more iterations can be done.")
```

```
else: # if not matched
```

```
    # finding minimum elt.
```

```
    minE = float('inf')
```

```
    for i in _list[p:]:
```

```
        minE = min(minE, i)
```

```
    # finding position of min elt.
```

```
    minposition = _list.index(minE)
```

```
    # Exchanging (swapping) the element
```

```
    t = _list[p]
```

```
    _list[p] = _list[minposition]
```

```
    _list[minposition] = t
```

```
    # _list[p], _list[minposition] = _list[minposition], _list[p]
```



def

```
if __name__ == "__main__": # driver function
    n = int(input("Enter the size of the list:")) # taking input
    list = [int(input(f"Enter {i+1}th element of the list:")) for i in range(n)] # list input.
```

```
p = 0 # initialize p with 0.
while (True): # menu driven.
```

```
    print(""" Enter 1 to execute the iteration
            Enter 2 to print status
            Enter 3 to terminate
            """)
```

```
    choice = int(input("Enter your choice:"))
    if (choice == 1):
```

```
        try:
```

```
            selectionsort(p, list) # call
            # calling function
```

```
        except Exception as e: # excepting exception
            print(e)
            break
```

```
        p = p + 1
```

```
        # break the loop
        # increment p
```

```
    elif (choice == 2):
```

```
        print(f"Iteration to be executed: p = {p}, list = {list}")
        print(f"After the last iteration: p = {p}, list = {list}")
```



elif (choice == 3):  
 break

# to terminate.