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CourseName: Advance Python Programming   **Course code:** 22CSH-623

Experiment-1.5

A) Aim: Write a python program to print the elements in the array in reverse order

Tools/Software Required: VS Code, Python

Description:

In this program, we are printing the elements in the array in reverse order. We are using a while loop to iterate over the array and swapping the elements at the start and end index. Finally, we are returning the reversed array.

Steps:

1. Take input from the user.
2. Initialize start = 0, end = len(arr)-1
3. Use for loop to iterate over the array.
4. Swap the start and end elements.
5. Increment start and decrement end.
6. Print the array.

Implementation:

```
def reverse_array(arr):
    start = 0
    end = len(arr)-1
    while start < end:
        arr[start], arr[end] = arr[end], arr[start]
        start += 1
        end -= 1
    return arr
arr = [1,2,3,4,5]
print("Elements in the array in reverse order: ",
reverse_array(arr))
```

Output:

```
$ python reverse_array.py
Elements in the array in reverse order:  [5, 4, 3, 2, 1]
```

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B) Aim: Write a python program to find the sum of elements of an array.

Tools/Software Required: VS Code, Python

Description: In this program, we are finding the sum of elements of an array. We are using for loop to iterate over the array and add each element to the sum variable. Finally, we are returning the sum of elements of an array.

Steps:

1. Take input from the user.
2. Initialize sum = 0
3. Use for loop to iterate over the array.
4. Add each element to the sum variable.
5. Return the sum of elements of an array.

Implementation:

```python
def sum_array(arr):
    sum = 0
    for i in arr:
        sum += i
    return sum

arr = [1,2,3,4,5]
print("Sum of elements of an array: ", sum_array(arr))
```

Output:

```
$ python sum_array.py
Sum of elements of an array:  15
```

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C) Aim: Write a python program to find the largest element in an array.

Tools/Software Required: VS Code, Python

Description:

In this program, we are finding the largest element in an array. We are using for loop to iterate over the array and compare each element with the max variable. Finally, we are returning the largest element in an array.

Steps:

1. Take input from the user.
2. Initialize max = arr[0]
3. Use for loop to iterate over the array.
4. Compare each element with the max variable.
5. Return the largest element in an array.

Implementation:

```python
def largest(arr):
    max = arr[0]
    for i in arr:
        if i > max:
            max = i
    return max

arr = [5, 2, 8, 7, 1]

print("Largest element in an array: ", largest(arr))
```

Output:

```
$ python largest.py
Largest element in an array:  8
```

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