

Explorer

- main.c

```
1 #include <stdio.h>
2 void deleteElement(int *arr, int *size, int
  index) {
3     if (index < 0 || index >= *size) {
4         printf("Invalid index\n");
5         return;
6     }
7     for (int i = index; i < *size - 1; i++) {
8         arr[i] = arr[i + 1];
9     }
10    (*size)--;
11 }
12 int main() {
13     int arr[] = {1, 2, 3, 4, 5};
14     int size = sizeof(arr) / sizeof(arr[0]);
15     int index;
16     printf("Enter the index of the element to
  delete: ");
17     scanf("%d", &index);
18     deleteElement(arr, &size, index);
19     printf("Array after deletion:\n");
20     for (int i = 0; i < size; i++) {
21         printf("%d ", arr[i]);
22     }
23     printf("\n");
24     return 0;
```

Output

```
/tmp/a.out
Enter the index of the element to delete: 2
Array after deletion:
1 2 4 5
```

Explorer

main.c

```
1 #include <stdio.h>
2 void reverseArray(int *arr, int size) {
3     int *start = arr;
4     int *end = arr + size - 1;
5     while (start < end) {
6         int temp = *start;
7         *start = *end;
8         *end = temp;
9         start++;
10        end--;
11    }
12 }
13 int main() {
14     int arr[] = {1, 2, 3, 4, 5};
15     int size = sizeof(arr) / sizeof(arr[0]);
16     printf("Original array:\n");
17     for (int i = 0; i < size; i++) {
18         printf("%d ", arr[i]);
19     }
20     printf("\n");
21     reverseArray(arr, size);
22     printf("Reversed array:\n");
23     for (int i = 0; i < size; i++) {
24         printf("%d ", arr[i]);
25     }
26     printf("\n");
```

Output

```
/tmp/a.out
Original array:
1 2 3 4 5
Reversed array:
5 4 3 2 1
```

Explorer

main.c

```
1 #include <stdio.h>
2 void findLargestSmallest(int *arr, int size, int
   *largest, int *smallest) {
3     *largest = *arr;
4     *smallest = *arr;
5     for (int i = 1; i < size; i++) {
6         if (*(arr + i) > *largest) {
7             *largest = *(arr + i);
8         }
9         if (*(arr + i) < *smallest) {
10            *smallest = *(arr + i);
11        }
12    }
13 }
14 int main() {
15     int arr[] = {4, 7, 2, 9, 1, 5};
16     int size = sizeof(arr) / sizeof(arr[0]);
17     int largest, smallest;
18     findLargestSmallest(arr, size, &largest, &
       smallest);
19     printf("The largest element in the array is:
       %d\n", largest);
20     printf("The smallest element in the array is:
       %d\n", smallest);
21     return 0;
22 }
```

Output

```
/tmp/a.out
The largest element in the array is: 9
The smallest element in the array is: 1
```


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Explorer

main.c

main.c x

Save Run

```
1  #include <stdio.h>
2
3  void copyArray(int *source, int *target, int size) {
4      for (int i = 0; i < size; i++) {
5          *(target + i) = *(source + i);
6      }
7  }
8
9  int main() {
10     int source[] = {1, 2, 3, 4, 5};
11     int target[5];
12     int size = sizeof(source) / sizeof(source[0]);
13     copyArray(source, target, size);
14     printf("Contents of the target array:\n");
15     for (int i = 0; i < size; i++) {
16         printf("%d ", target[i]);
17     }
18     printf("\n");
19
20     return 0;
21 }
```

Output

\$ /tmp/a.out
Contents of the target array:
1 2 3 4 5

Explorer

main.c

```
1 #include <stdio.h>
2 void findIntersection(int *arr1, int size1, int
  *arr2, int size2) {
3     printf("Intersection of the two arrays: ");
4     for (int i = 0; i < size1; i++) {
5         for (int j = 0; j < size2; j++) {
6             if (*(arr1 + i) == *(arr2 + j)) {
7                 printf("%d ", *(arr1 + i));
8                 break;
9             }
10        }
11    }
12    printf("\n");
13 }
14
15 int main() {
16     int arr1[] = {1, 2, 3, 4, 5};
17     int size1 = sizeof(arr1) / sizeof(arr1[0]);
18
19     int arr2[] = {3, 4, 5, 6, 7};
20     int size2 = sizeof(arr2) / sizeof(arr2[0]);
21
22     findIntersection(arr1, size1, arr2, size2);
23
24     return 0;
25 }
```

Output

/tmp/a.out
Intersection of the two arrays: 3 4 5

Explorer

main.c

```
1 #include <stdio.h>
2 unsigned long long factorial(int n) {
3     if (n == 0) {
4         return 1;
5     } else {
6         return n * factorial(n - 1);
7     }
8 }
9
10 int main() {
11     int n;
12     printf("Enter a non-negative integer: ");
13     scanf("%d", &n);
14
15     if (n < 0) {
16         printf("Factorial is not defined for
17             negative numbers.\n");
18     } else {
19         unsigned long long fact = factorial(n);
20         printf("Factorial of %d is %llu\n", n,
21             fact);
22     }
23     return 0;
24 }
```

Output

/tmp/a.out
Enter a non-negative integer: 6
Factorial of 6 is 720

Explorer

main.c

main.c x

Save Run

```
1  #include <stdio.h>
2  int fibonacci(int n) {
3      if (n <= 1) {
4          return n;
5      } else {
6          return fibonacci(n - 1) + fibonacci(n -
7              2);
8      }
9
10 int main() {
11     int n;
12     printf("Enter the value of n: ");
13     scanf("%d", &n);
14
15     if (n < 0) {
16         printf("Invalid input. Fibonacci sequence
17             is not defined for negative numbers.\n");
18     } else {
19         int result = fibonacci(n);
20         printf("The %dth Fibonacci number is:
21             %d\n", n, result);
22     }
23     return 0;
}
```

Output

/tmp/a.out
Enter the value of n: 25
The 25th Fibonacci number is: 75025

Explorer

main.c

```
1 #include <stdio.h>
2 int sumOfDigits(int num) {
3     if (num == 0) {
4         return 0;
5     } else {
6         return (num % 10) + sumOfDigits(num /
7             10);
8     }
9
10 int main() {
11     int num;
12     printf("Enter a number: ");
13     scanf("%d", &num);
14
15     int sum = sumOfDigits(num);
16     printf("Sum of digits of %d is %d\n", num,
17         sum);
18
19     return 0;
20 }
```

Output

```
/tmp/a.out
Enter a number: 05
Sum of digits of 5 is 5
```