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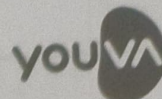
STD: BTech Cse 1st year   DIV: B28   ROLL NO.:

SUBJECT: Computer Science - Programming in C

youva

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```
            }
          }
        }
      }
    }

  return 0;
  }
```

Experiment – 5 → Arrays

Exp → 5_1 →

```c
#include <stdio.h>
int main() {
  int i, n;
  printf(" Enter number of elements : ");
  scanf(" %d", & n);

  int arr [n];
  printf(" Enter %d integers : \n ",n);
  for (i=0 ; i<n ; i++) {
    scanf("%d", &arr [i]);
  int first, second;
  first = second = -21474;
  for (i=0 ; i<n ; i++) {
    if (arr [i] > first) {
      Second = first;
      first = arr [i]
    } else if ( arr [i] > second && arr [i] <first) {
      Second = arr [i];
    }
  }
```

```c
2
3      int main() {
4          int n;
5          printf("Enter the number of integers: ")
6          scanf("%d", &n);
7
8          int arr[n];
9          printf("Enter %d integers:\n", n);
10         for (int i = 0; i < n; i++) {
11             scanf("%d", &arr[i]);
12         }
13
14         int largest = arr[0];
15         int secondLargest = arr[0];
16
17         for (int i = 1; i < n; i++) {
18             if (arr[i] > largest) {
19                 secondLargest = largest;
20                 largest = arr[i];
21             } else if (arr[i] > secondLargest &&
22                 secondLargest = arr[i];
23             }
24         }
25
26         printf("The second largest integer is: %
27         return 0;
28     }
29
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   PORTS

```
PS C:\Users\Yash\EXP> ./a.exe
Enter the number of integers: 5
Enter 5 integers:
1 2 3 4 5
The second largest integer is: 4
PS C:\Users\Yash\EXP>
```

```c
    if (second == - 2147) {
        printf(" There no second largest element ");}
    else {
        printf (" The second largest element is : %d \n, "second);
        }
    return 0;
    }
```

S.2→
```c
# include <stdio.h>
    int main () {
        int n, i;
        printf (" Enter the number of elements ");
        scanf ("%d", & n);
        int arr[n]
        printf (" Enter the number of elements ",n );
        for ( i=0 ; i <n ; i++) {
            scanf ("%d", & arr[i];
        }
    int positive = 0 , negative = 0, odd = 0, even = 0;
    for (i=0; i <n; i++) {
        if (arr[i] > 0)
            positive ++;
    else if ( arr [i] <0)
            negative ++;
        if (arr[i] %2 == 0)
            even ++;
        else odd ++;
        }
```

C exp3-1-5.c   C exp3-2-1.c   C exp3-2-2.c

C exp5-2.c > ...

```c
 3    int main() {
 7
 8        int arr[n];
 9        int positive = 0, negative = 0, odd =
10
11        printf("Enter %d integers:\n", n);
12        for (int i = 0; i < n; i++) {
13            scanf("%d", &arr[i]);
14
15            if (arr[i] > 0)
16                positive++;
17            else if (arr[i] < 0)
18                negative++;
19
20            if (arr[i] % 2 == 0)
21                even++;
22            else
23                odd++;
24        }
25
26        printf("Positive numbers: %d\n", pos
27        printf("Negative numbers: %d\n", neg
28        printf("Even numbers: %d\n", even);
29        printf("Odd numbers: %d\n", odd);
30
31        return 0;
32    }
33
```

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PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   PORTS

```
1 2 3 4 5
Positive numbers: 5
Negative numbers: 0
Even numbers: 2
Odd numbers: 3
PS C:\Users\Yash\EXP>
```

```c
printf(" Positive numbers = %d \n ", positive);
printf(" Negative numbers = %d\n", negative);
printf("odd numbers = %d \n", odd);
printf("even numbers = %d \n ",even);

return 0;
}
```

5.3 →
```c
#include <stdio.h>
int main() {
    int n, i, key, count = 0;
    printf("Enter the number of elements: ");
    scanf("%d", &n);
    int arr[n];
    printf("Enter %d integers \n ", n);
    for (i=0; i<n; i++) {
        scanf("%d", & arr[i]);
    printf(" Enter the number to find its frequency : ");
    scanf("%d", & key);}
        for (i = 0; i<n; i++) {
        if (arr[i] == key ) {
            count ++;
        }

    }
    if (count > 0) {
        printf(" The number %d appears %d times", key, co
        else { printf("The number %d does not appear", key); }
        return 0;

    }
```

C exp5-3.c > ...

```c
 1    #include <stdio.h>
 2
 3    int main() {
 4        int n, num, frequency = 0;
 5        printf("Enter the number of integ
 6        scanf("%d", &n);
 7
 8        int arr[n];
 9        printf("Enter %d integers:\n", n)
10        for (int i = 0; i < n; i++) {
11            scanf("%d", &arr[i]);
12        }
13
14        printf("Enter the number to find
15        scanf("%d", &num);
16
17        for (int i = 0; i < n; i++) {
18            if (arr[i] == num) {
19                frequency++;
20            }
21        }
22
23        printf("The frequency of %d i
24        return 0;
25    }
26
```

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PROBLEMS   OUTPUT   DEBUG CONSOLE   **TERMINAL**

```
Enter the number of integers: 5
Enter 5 integers:
1 2 3 4 5
Enter the number to find its frequency:  2
The frequency of 2 in the list is: 1
PS C:\Users\Yash\EXP>
```