

## Arrays :-

- A program to find the mode :-

```
int A[S];  
int i, j, maxvalue=0, maxcount=0, count=0,  
temp;
```

```
printf ("enter elements\n");
```

```
for (i=0; i<S; i++)  
scanf ("%d", &A[i]);
```

```
for (i=0; i<S; i++)  
for (j=0; j<S; j++)
```

```
if (A[i] == A[j])  
count ++;
```

```
if (count > maxcount)
```

```
{
```

```
temp = maxcount;  
maxcount = count;  
count = temp;
```

```
}
```

```
maxvalue = A[i];
```

```
}
```

```
printf ("%d", maxvalue);  
return 0;
```

Alaa Elaiw

- A program to sum odd numbers of an array

```
int sumofodd (int [], int);  
int main ()
```

```
{
```

```
int A [5], i, s;
```

```
for (i=0; i<5; i++)  
scanf ("%d", &A[i]);
```

```
s = sumofodd (A, 5);
```

```
printf ("%d", s);
```

```
return 0;
```

```
}
```

```
int sumofodd ( int x[], int n)
```

```
{
```

```
int i, sum = 0;
```

```
for (i=0; i<n; i++)
```

```
{
```

```
if (x[i] % 2 != 0)
```

```
{
```

```
sum += x[i];
```

```
}
```

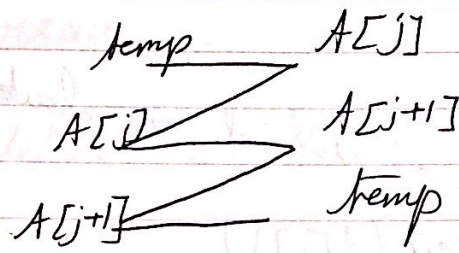
```
}
```

```
return sum;
```

```
}
```

Alexa Ebrahimi

## Bubble sort Arrays:-



- A program to find Abs value of an Array's elements

```
int main ()
{
    int i, A[5], x;
    printf ("-----")

    for (i=0; i<5; i++)
    {
        scanf ("%d", &A[i]);
    }

    ;

    for (i=0; i<5; i++)
    {
        x = abs (A[i]);
        printf ("%d-%d", A[i], x);
    }

    /
```

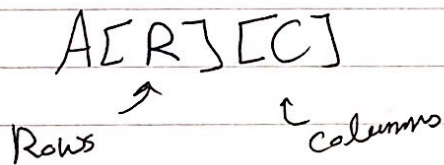
Manish

• A program that negates doubles :-

```
    enter elements  
    ...  
    for (i=0; i<S; i++)  
    {  
        if (A[i] != ceil(A[i])) defined as double  
            Count++;  
    }  
}
```

```
printf("%d is the num of doubles", Count);
```

• Multi dimensional arrays :-



A program that determines who won is a tic-tac-toe game

Revise these :-

→ The code :-

```
int mcounter=0, counter=0, count, i, j;  
for (i=0; i<S; i++)  
{  
    count=0;  
    for (j=0; j<n; j++)  
    {  
        if (a[i][j]==a[i][j])  
            count++;  
    }  
    if (count > counter  
{ counter = count  
  mcounter = a[i][j];  
}  
}
```

Alaa Etaini

skills :-

• Define

```
*define S 10
int main()
{
    int A[S];
    static A[S] = {0, 1, 2} ---
    for (i=0; i<S; i++)
    {
        scanf("%d", &A[i]);
    }
}
```

• find max & min :-

```
max = A[0];
for (i=0; i<S; i++)
{
    if (A[i] > max)
        max = A[i];
}
printf("%d", A[max]);
```

```
min = A[0];
for (i=0; i<S; i++)
{
    if (A[i] < min)
        min = A[i];
}
printf("%d", min);
```

• How to pass an array in a function

```
void Array (int [], int);
           ↑      ↑
           Array size

int main()
{
    → Array (A, S);
}

void Array (int x[], int n)
```

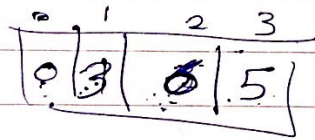
Haa Ebraimi

• linear search :-

```
for (i=0; i < S; i++)  
if (A[i] == Key)  
    printf ("position of Key is at %d", i)  
else  
    printf ("No such Key")
```

• Bubble sort :-

```
for (i=0; i < S; i++)  
for (j=0; j < S; j++)  
if (A[j] > A[j+1])  
    temp = A[j];  
    A[j] = A[j+1];  
    A[j+1] = temp
```



• How to define a Multidimensional Array

```
int A[S][S]  
for (i=0; i < S; i++)  
for (j=0; j < S; j++)  
    scanf ("%d", A[i][j]);
```

Alexa Ghaini

- How to sum Columns & Rows

```

Sum [R] = [0];
Rows => for (i=0; i<S; i++)
        for (j=0; j<S; j++)

```

~~sum[i] =~~

```

sum [i] = sum [i] + A [i][j];
printf ("%d", sum [i]);

```

```

Columns => for (i=0; i<S; i++)
            for (j=0; j<S; j++)
                sum [j] = sum [j] + A [i][j];
            printf ("%d", sum [j]);

```

### strings

- How to define a string:

```

char x[S];
scanf ("%s", x);

```

- How to know number of letters in a string

```

for (i=0; i<R; i++)
for (i=0; i<R; i++)
    while (x[i] != '\0')
        if (x[i] == 'a')
            count++;
        i++;

```

Alea Ebrahimi



• sorting elements in descending & ascending order

ascending  $\rightarrow$  Bubble sort

descending  $\rightarrow$

```
for (i=0; i<S; i++)  
  for (j=0; j<S; j++)
```

```
    if (A[j] < A[j+1])
```

```
      {  
        temp = A[j];
```

```
        A[j] = A[j+1];
```

```
        A[j+1] = temp;
```

```
      }
```

---

How to check an ending for a group of strings:-

```
for (i=0; i<S; i++)
```

```
  j=0; j = strlen (word [i]);
```

```
  while (A
```

```
  if (word [i][j-1] == 'l') {
```

```
    printf
```

Alaa Etaiwi