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1,2.

4  
1. Write a C program to calculate the sum of digits of a number.

```
#include <stdio.h>
int main
{
    int n, sum=0, m;
    printf("Enter a number:");
    scanf("%d", &n);
    while (n > 0)
    {
        m = n % 10;
        sum = sum + m;
        n = n / 10;
    }
    printf("Sum = %d", sum);
    return 0;
}
```

2. Print the sum of all the even elements and even position elements in an array.

```
int main
{
    int array[100], i, num, final sum, sum;
    printf("Enter the size of an array (n)");
    scanf("%d", &num);
    printf("Enter the elements of the array (n)");
    for(i=0; i<num; i++)
    {
        scanf("%d", array[i]);
    }
    for(i=0; i<num; i++)
    {
        if (array[i] % 2 == 0)
            sum += array[i];
    }
    for(i=0; i<num; i+=2)
    {

```

3.

```

Final sum = sum + array[i];
}
printf ("Total sum = %d", final sum);
return 0;
}

```

Count the total number of words in string.

```

int main
{
char str[50];
int i, words;
printf ("Enter any string: ");
scanf ("%c", str[50]);
i = 0;
words = 1;
while

int main
{
char str[ ];
int i;
printf ("Enter a string: ");
scanf ("%s", str);

i = 0;
words = 1;
while (str[i] != '\0')
{
if (str[i] == ' ' || str[i] == '\n' || str[i] == '\t')
{
words ++;
}
i ++;
}
printf ("Total no. of words %d", words);
return 0;
}

```

4.

4. Find the largest and smallest element in any array

```
#include <stdio.h>
```

```
int main()
```

```
{
```

```
int a[50], i, n, largest, smallest;
```

```
printf("Enter the number of elements:");
```

```
scanf("%d", &n);
```

```
printf("\n Input the array elements:");
```

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

```
scanf("%d", &a[i]);
```

```
largest = smallest = a[0];
```

```
for (i=1; i<n; ++i)
```

```
{ if (a[i] > largest)
```

```
largest = a[i];
```

```
if (a[i] < smallest)
```

```
smallest = a[i];
```

```
}
```

```
printf("\n Smallest element %d \n", smallest);
```

```
printf("\n largest element %d \n", largest);
```

```
return 0;
```

```
}
```

5.

5. Write a program to print given patterns using loops

```

      *           *
    *   *       *
      *   *
    *   *   *
      *           *
    *           *
  
```

```

#include <stdio.h>

int main(void)
{
    int n, m;
    printf("Enter the number for space");
    scanf("%d", &n);
    m = 2 * n - 1;
    for (int i = 1; i <= m; i++)
    {
        for (int j = 1; j <= m; j++)
        {
            if (i == j || j == (m - i + 1))
            {
                printf("*");
            }
            else
            {
                printf(" ");
            }
        }
        printf("\n");
    }
    return 0;
}
  
```

