| S.No: 36 | Exp. Name: ***sum of digits of the largest number*** | Date:2024-11-22 |
|---|---|---|

**Aim:**

Write a C program to print the sum of digits of the largest number from the given set of 4-digit numbers.

**Source Code:**

sum_of_digits.c

```
#include <stdio.h>
int largestnumber(int n)
{
   int i,a,b;
   b=0;
   for(i=1;i<=n;i++)
      {printf("Enter number %d: ",i);
      scanf("%d",&a);
      if(a<999||a>9999)
      {while(a<999||a>9999)
         {printf("Enter a valid 4-digit number\n");
         printf("Enter number %d: ",i);
         scanf("%d",&a);
         }}
      if(b<a)
      {b=a;}}
   printf("largest number: %d\n",b);
   return b;
}
void SUM(int b, int n)
{
int i, sum;
sum=0;
for(i=4;i>0;i--)
{if(b%10==0)
{b=b/10;}
   else{sum+=b%10;
      b=b/10;
      }
}printf("sum of its digits: %d\n",sum);
}
int main(){
   int n;
   int b;
   printf("count of 4-digit numbers: ");
   scanf("%d",&n);
   b=largestnumber(n);
   SUM(b,n);
   return 0;
}
```

Execution Results - All test cases have succeeded!

Test Case - 1


ID: I2414

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| User Output |
| --- |
| count of 4-digit numbers: 3 |
| Enter number 1: 1234 |
| Enter number 2: 3456 |
| Enter number 3: 4000 |
| largest number: 4000 |
| sum of its digits: 4 |

| Test Case - 2 |
| --- |
| User Output |
| count of 4-digit numbers: 4 |
| Enter number 1: 1100 |
| Enter number 2: 200 |
| Enter a valid 4-digit number 2000 |
| Enter number 2: 2000 |
| Enter number 3: 3000 |
| Enter number 4: 99999 |
| Enter a valid 4-digit number 9999 |
| Enter number 4: 9999 |
| largest number: 9999 |
| sum of its digits: 36 |