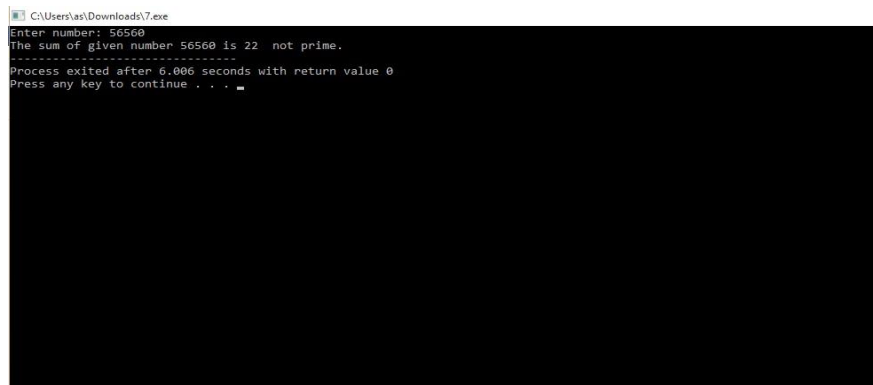### Name: VOLETI RAVI

7. Check whether the sum of digits of a 5 digit number is a prime number or not. Ensure that the input no. is a 5 digit number.

Code:

```c
#include<stdio.h>
int main(){
int n,i,sum,org,x;
  printf("Enter number: ");
  scanf("%d",&n);
  org=n;
  sum=0;
  int j=0;
  while (n!=0)
  {  j++;
    x= n%10;
    sum=sum+x;
    n/=10;
  }
  if(j!=5){printf("Enter the 5 digit number");
  return;
  }
  printf("The sum of given number %d is %d",org,sum);
  for(i=sum/2;i>1;i--){
   if(sum%i==0){
        printf(" not prime.");
      return 0;
   }
  }
  printf("  prime.");
}
```

Output:

8. Calculate the pay scale of an employee by obtaining the following, Basic salary, Dearness allowance (45% of basic sal), House Rental Allowance (12% of basic), City Compensatory Allowance (10% of basic, provided if the employee resides in a city or 0 otherwise), Deductions (if any for loans), Also have additional information on overtime worked and calculate the amount for that based on hours worked and rate per hour (102 for days/ 240Rs. Per night). Finally calculate the tax amount with the following slabs,

1-1, 05,000 - Nil
1, 05,001-remaining – 10%.
Code:

```c
#include<stdio.h>
#include<string.h>
int main(){
char c;
float bs,da,hra,tax,cca,de,ovd,ovn,salary;
printf("\nEnter the basic salary of the employee: ");
scanf("%f",&bs);
da=45*bs/100;
hra=(0.12)*bs;
printf("\nDoes the employee reside in a city     y/n");
scanf("%s",&c);
if(c=='y'){cca=(0.1)*bs;}
else{cca=0;}
printf("\nHas the employee taken any loan?              y/n");
c='\0';
scanf("%s",&c);
if('y'==c){printf("\nType the loan monthly deduction amount: ");scanf("%d",&de);}
else{de=0;}
printf("\nThe number of days the employee has done overtime: ");
scanf("%f",&ovd);
ovd*=102;
printf("\nThe number of nights the employee has done overtime: ");
scanf("%f",&ovn);
ovn*=204;
salary=bs+da+hra+cca+de+ovd+ovn;
if(salary>105000){tax=0.1*salary;}
else{tax=0;}
salary-=tax;
printf("\nThe employee will get %.2f per month and tax deduction is %.2f with the overtime payment of %.2f.\n",salary,tax,ovd+ovn);
}
```
Output:

```
Enter the basic salary of the employee: 50000

Does the employee reside in a city        y/nn

Has the employee taken any loan?                    y/nn

The number of days the employee has done overtime: 9

The number of nights the employee has done overtime: 10

The employee will get 81458.00 per month and tax deduction is 0.00 with the overtime payment of 2958.00.

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Process exited after 12.28 seconds with return value 106
Press any key to continue . . . _
```