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Assignment 1: C Programing.

1. Write a program to check whether a given number is odd or even.

Code:

```
#include<stdio.h>
int main()
{
   int a;
   printf("Enter the number for odd even comparison\n");
   scanf("%d",&a);
   if (a%2==0)
   {
      printf("The entered number %d is even number\n",a);
   }
   else
   {
      printf("The entered number %d is odd number\n",a);
   }
   return 0;
}
```

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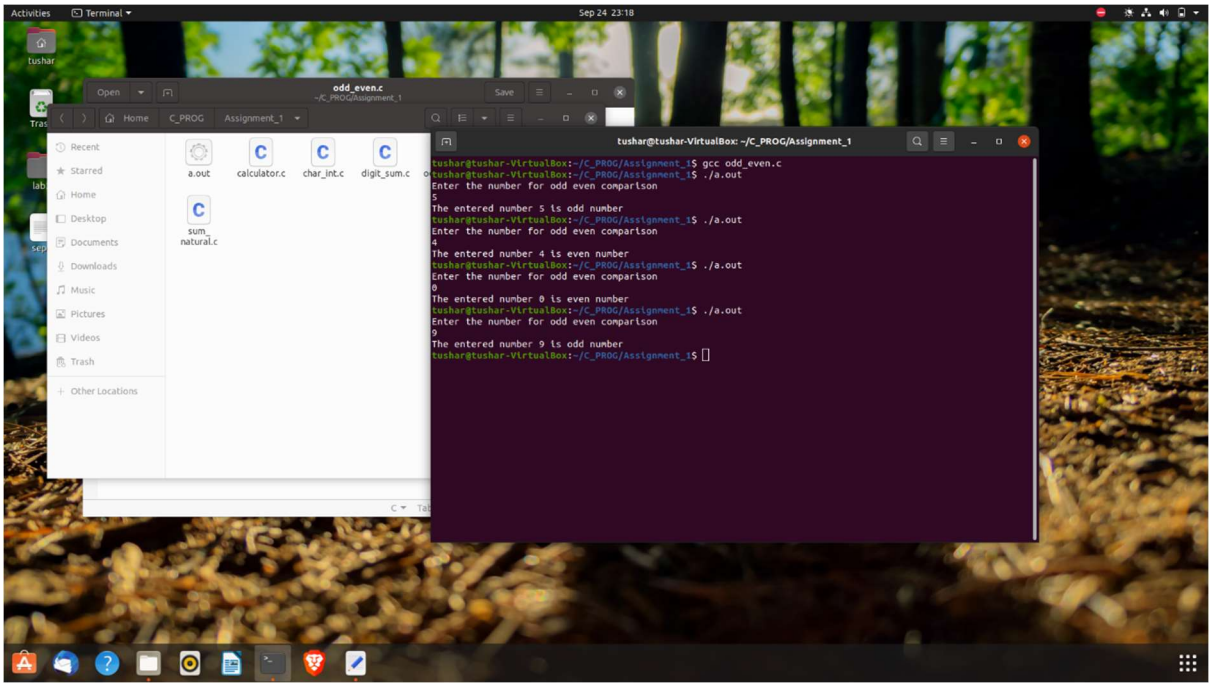
Output:



2. **Write a C program to check whether the input is digit or alphabet. Print the ASCII number if it is a digit.**

Code:

```
#include<stdio.h>
int main()
{
   char c;
   int val;
   printf("Enter a character or number: ");
   scanf("%c", &c);

   if ((c >= 'a' && c <= 'z') || (c >= 'A' && c <= 'Z'))
   {
      printf("%c is an alphabet.\n", c);
   }
   else if (c >= '0' && c <= '9')
   {
         val = c;
      printf("%c is an integer with ascii value %d. \n", c, val);
   }
   else
   {
      printf("enter the valid component.\n");
   }
   return 0;
}
```

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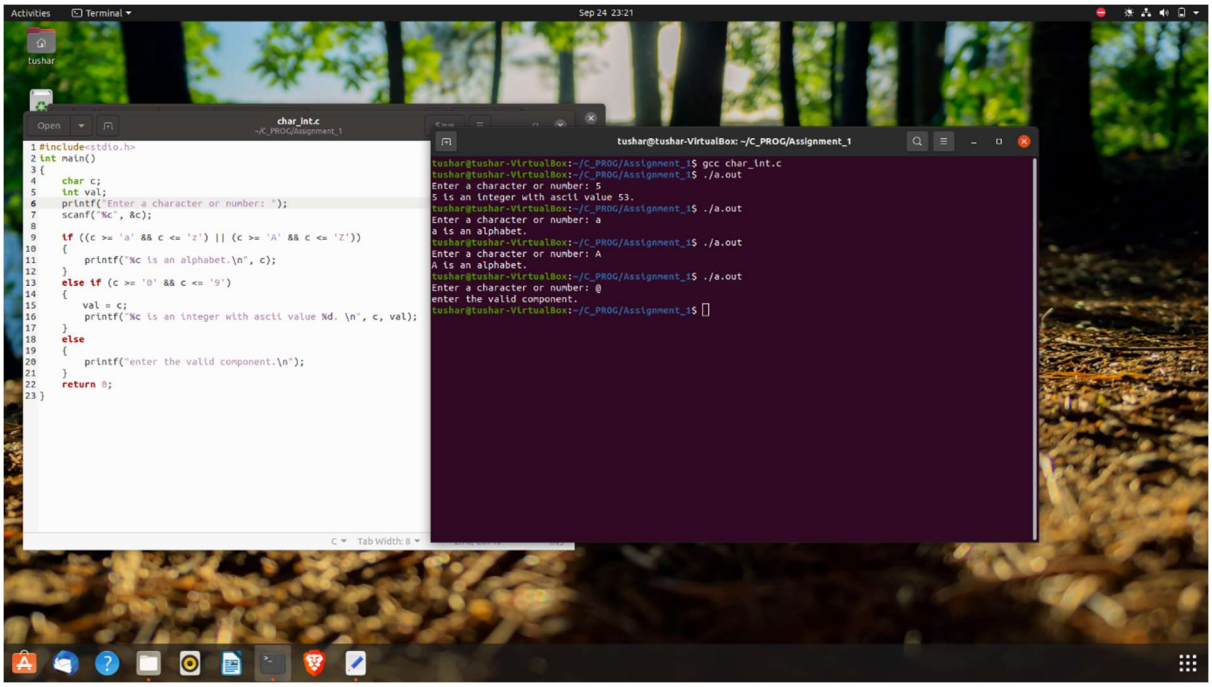
Output:



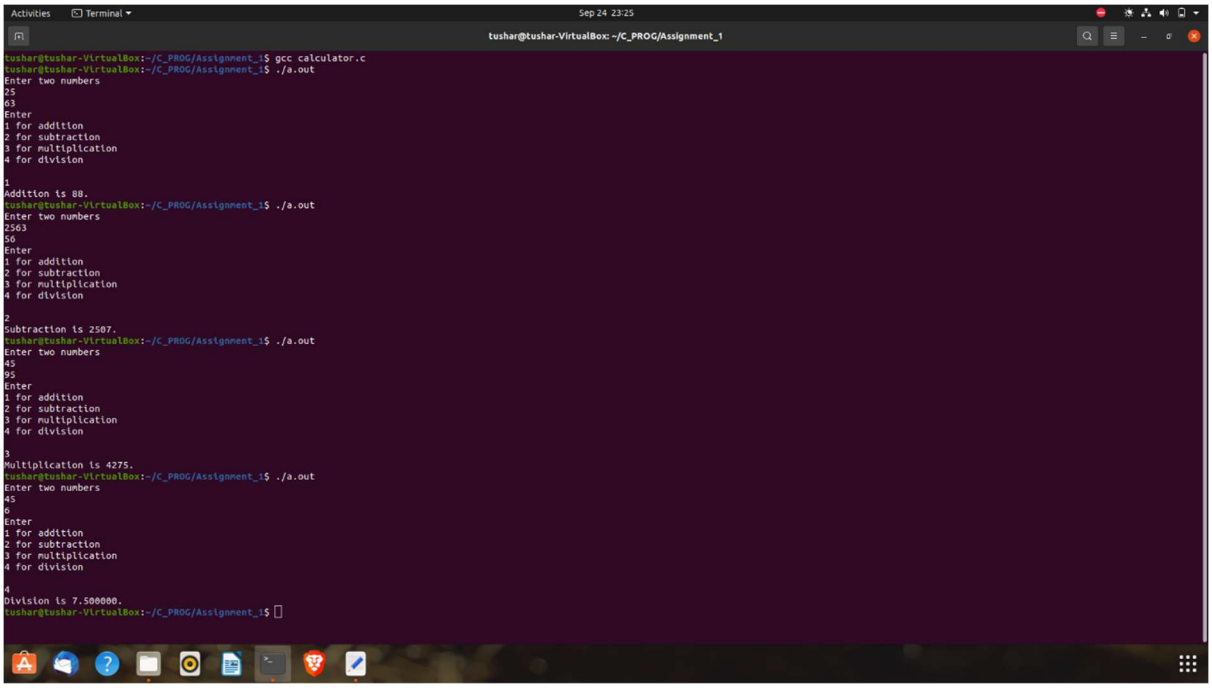
3. **Write a program to create a simple calculator to perform Addition, Subtraction, Multiplication and Division using switch statement. Take the required operation as input from the user.**

Code:

```
#include<stdio.h>
int main()
{
   int o, addition, subtraction, multiplication;
   float division, a, b;
   printf("Enter two numbers\n");
   scanf("%f%f",&a,&b);
   printf("Enter\n1 for addition\n2 for subtraction\n3 for multiplication\n4 for division\n\n");
   scanf("%d",&o);
   switch (o)
   {
   case 1:
      addition = a + b;
      printf("Addition is %d.\n", addition);
      break;
   case 2:
      subtraction = a - b;
      printf("Subtraction is %d.\n", subtraction);
      break;
   case 3:
      multiplication = a * b;
      printf("Multiplication is %d.\n", multiplication);
      break;
   case 4:
      division = a / b;
      printf("Division is %f.\n", division);
      break;
   default:
```

```
        printf("Enter valid number for operation.\n");
        break;
    }
    return 0;
}
```

Output:



4. **Write a program to find out the sum of first n natural numbers.**

   Take n as input from the user.

Code:

```
#include<stdio.h>
int main()
{
   int n, sum = 0;
   printf("Enter the natural number: \n");
   scanf("%d",&n);
   if (n!=0)
   {
      for (int i = 1; i <= n ; i++)
      {
         sum = sum + i;
      }
      printf("The sum of natural number upto %d is %d.\n",n,sum);
   }
   else
   {
      printf("Enter the natural number, given number is not natural.\n");
   }
   return 0;
}
```

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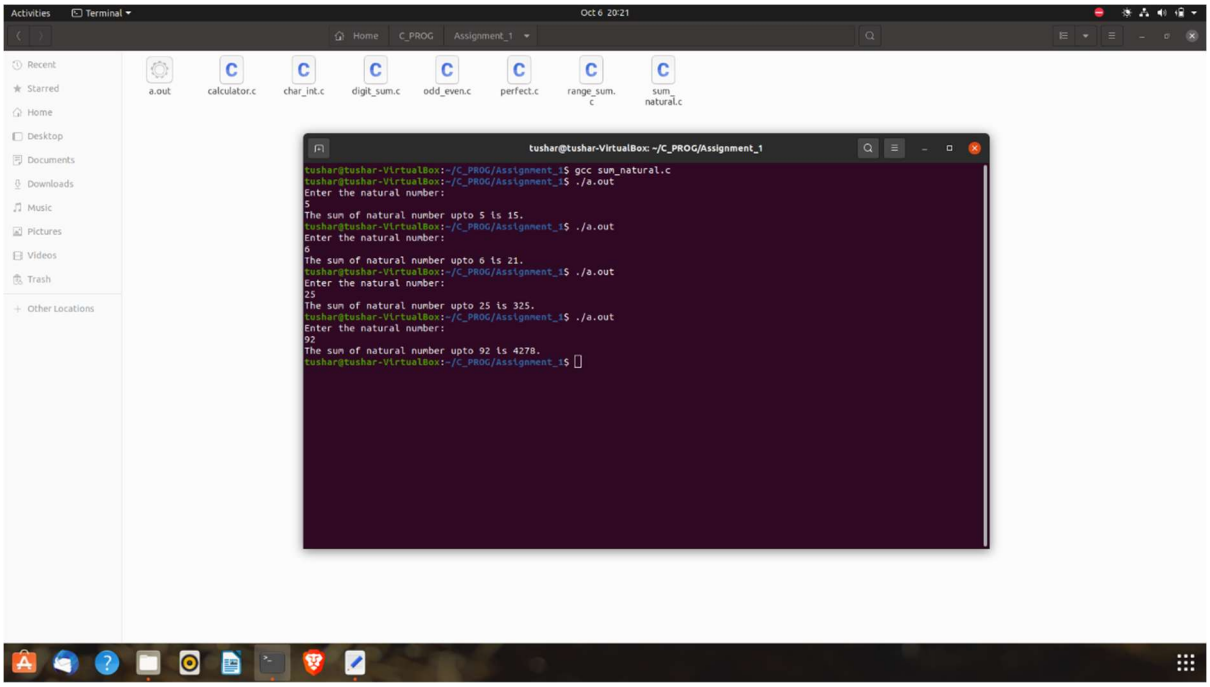
Output:



5. **Write a program to check whether the given number is perfect number or not.**

   A number is called as a perfect number if the sum of the factors of that number is equal to the same number. Example: 6 = 1 + 2 + 3

Code:

```
#include<stdio.h>
int main()
{
   int i = 1, num, sum = 0;
   printf("Enter the number to check perfect number: \n");
   scanf("%d", &num);

   while(i < num)
   {
      if(num % i == 0)
      {
         sum = sum + i;
      }
      i++;
   }
   if(sum == num)
   {
      printf("\n%d is Perfect Number.\n", num);
   }
   else
   {
      printf("\n%d is not a Perfect Number.\n", num);
   }
   return 0;
}
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```

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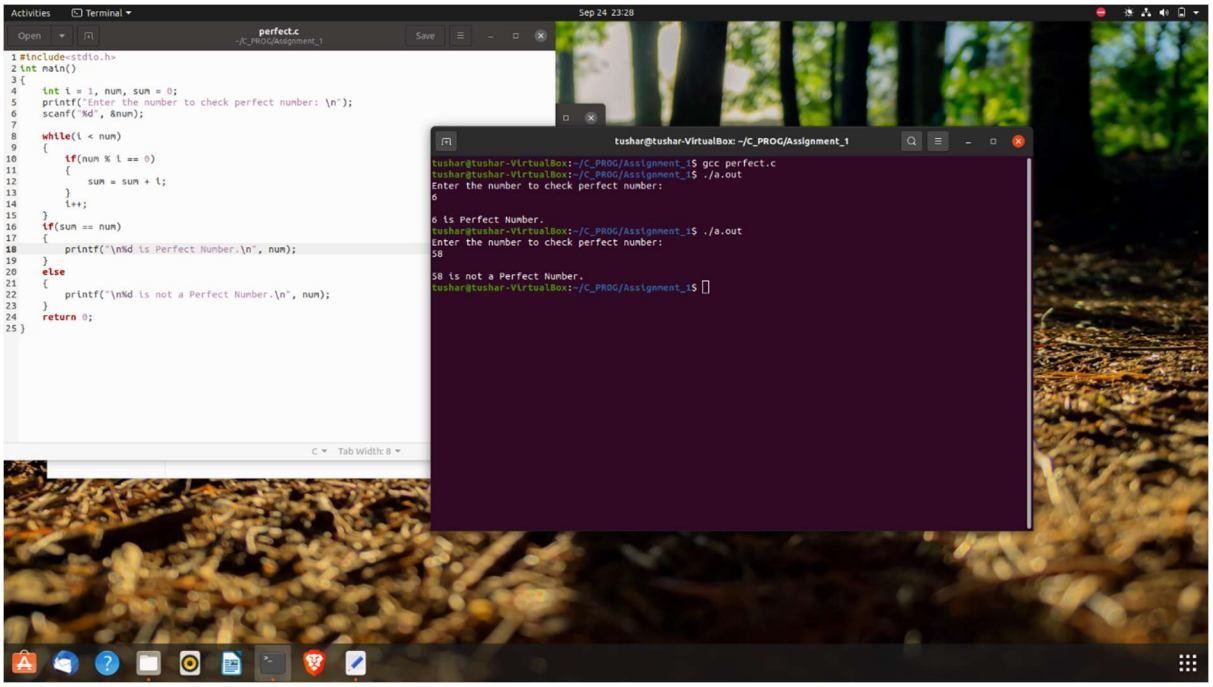
Output:



6. Write a program to find the sum of numbers in a given range.

Code:

```
#include<stdio.h>
int main()
{
   int a,b,sum=0;
   printf("Enter range for sum of integers:\n");
   scanf("%d%d",&a,&b);
   if (a < b)
   {
      for (int i = a+1; i < b; i++)
      {
         sum = sum + i;
      }
      printf("The sum of numbers in between %d and %d is %d. \n", a, b, sum);
   }
   else
   {
      printf("First number should be less than second.\n");
   }
   return 0;
}
```

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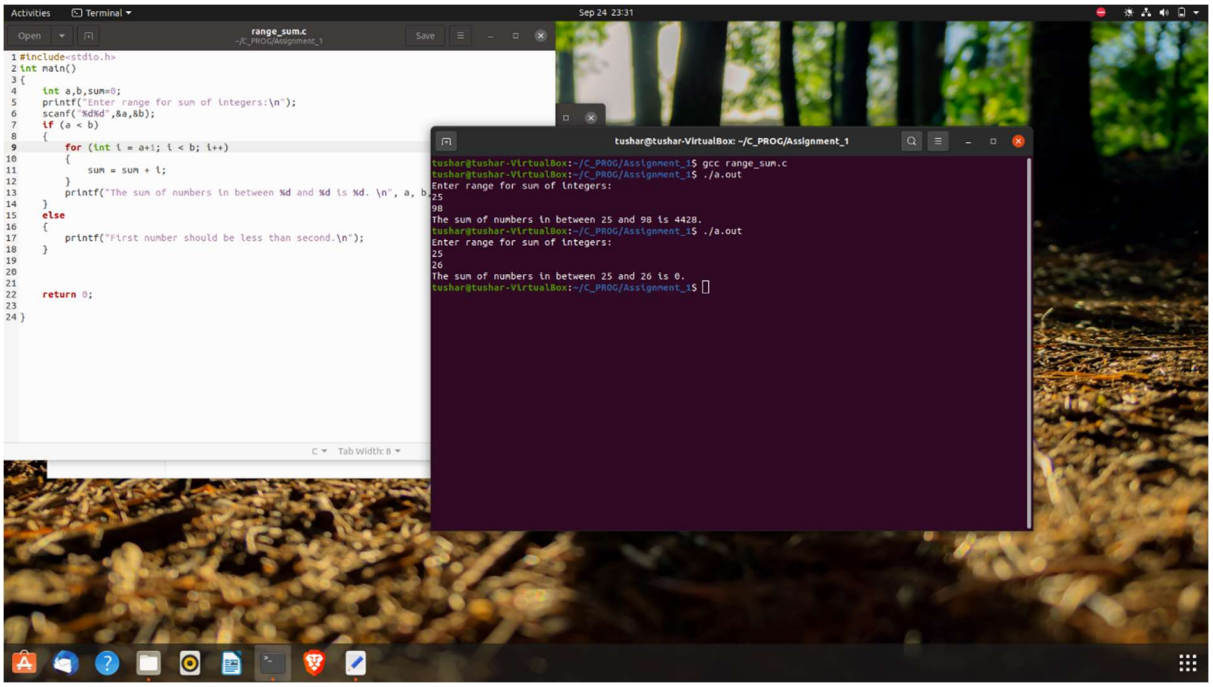
Output:



7. Write a program to calculate the sum of the digits of a given number.

Code:

```
#include<stdio.h>
int main()
{
   int n, sum = 0;
   printf("Enter the number: \n");
   scanf("%d",&n);
   int number = n;
   while (n != 0)
   {
      sum = sum + n%10;
      n = n/10;
   }
   printf("The sum of digits of %d is %d. \n",number ,sum);
   return 0;
}
```

Output: