

Basic C Programs

1. C Program To Print Student Details

```
DEV C++ C:\Users\student\Desktop\cprograms.cpp - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
[Icons] (globals)
cbasics.cpp cprograms.cpp
2  #include<stdio.h>
3  #include<string.h>
4  int main()
5  {
6  //declaration of variable in integer
7  int id;
8  //declaration of variable in charecters
9  char Name[50], Department[50], Campus[50], University[50];
10 //to print name, student id, department, campus, university in output
11 printf("Name:");
12 scanf("%s", &Name); // %s to print name in charecter
13 printf("Student id:");
14 scanf("%d", &id); // %d is to print id in integer
15 printf("Enter Department:");
16 scanf("%s", &Department);
17 printf("Enter Campus:");
18 scanf("%s", &Campus);
19 printf("Enter University:");
20 scanf("%s", &University);
21 printf("Name Of The Student Is:%s\n", Name);
22 printf("ID Of The Student Is:%d\n", id);
23 printf("Department Of The Student Is:%s\n", Department);
24 printf("Campus Of The Student Is:%s\n", Campus);
25 printf("University Of The Student Is:%s\n", University);
26 return 0;
27 }
```

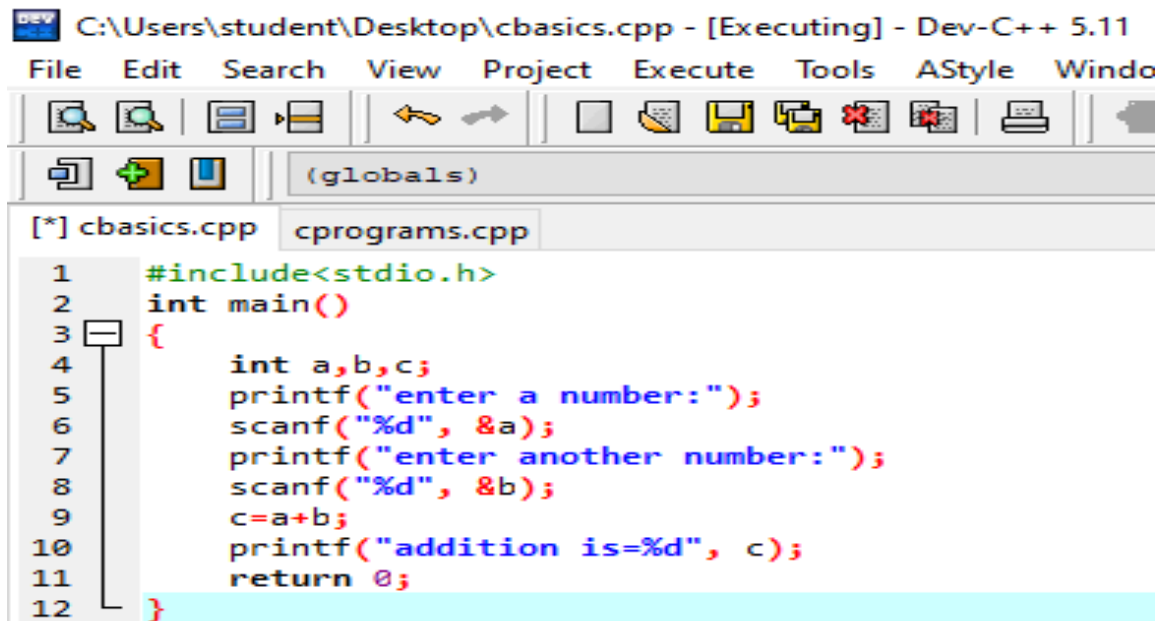
OUTPUT:

```
C:\Users\student\Desktop\cprograms.exe
Name:pooja
Student id:180866
Enter Department:cse
Enter Campus:sklm
Enter University:rgukt
Name Of The Student Is:pooja
ID Of The Student Is:180866
Department Of The Student Is:cse
Campus Of The Student Is:sklm
University Of The Student Is:rgukt

-----
Process exited after 18.72 seconds with return value 0
Press any key to continue . . .
```

Basic C Programs

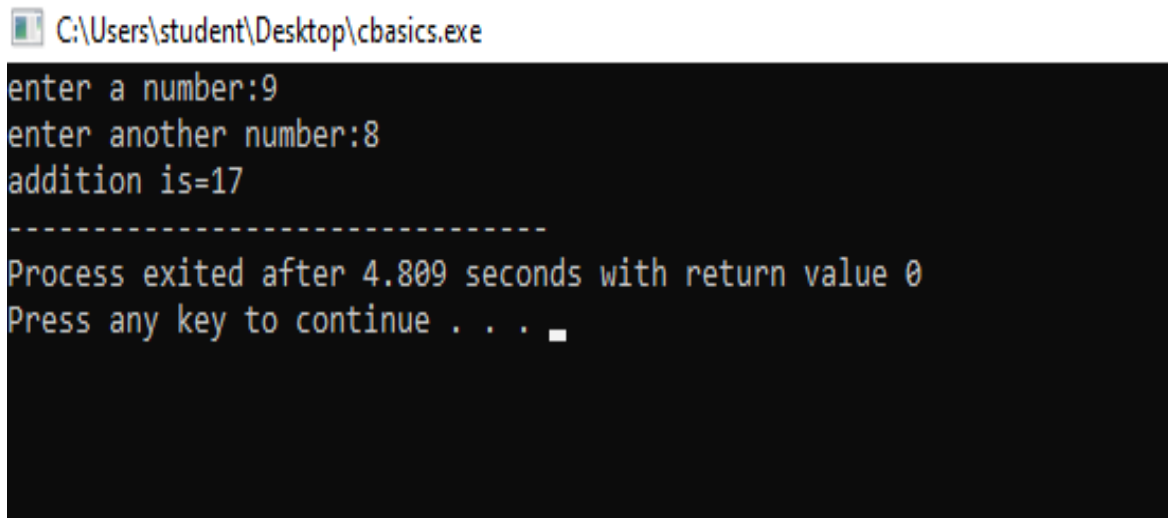
2. C Program for the Addition of two given numbers



The screenshot shows the Dev-C++ 5.11 IDE with the file `C:\Users\student\Desktop\cbasics.cpp` open. The menu bar includes File, Edit, Search, View, Project, Execute, Tools, AStyle, and Window. The toolbar contains various icons for file operations and execution. The file explorer on the left shows `cbasics.cpp` and `cprograms.cpp`. The main editor window displays the following C code:

```
1  #include<stdio.h>
2  int main()
3  {
4      int a,b,c;
5      printf("enter a number:");
6      scanf("%d", &a);
7      printf("enter another number:");
8      scanf("%d", &b);
9      c=a+b;
10     printf("addition is=%d", c);
11     return 0;
12 }
```

OUTPUT:



The screenshot shows the command prompt window with the title `C:\Users\student\Desktop\cbasics.exe`. The output of the program is as follows:


```
enter a number:9
enter another number:8
addition is=17
-----
Process exited after 4.809 seconds with return value 0
Press any key to continue . . .
```

Basic C Programs

3. C Program for the Subtraction of two given numbers

```
[*] Untitled1  cprograms.cpp
1  //c program to print subtraction of two numbers
2  #include<stdio.h>
3  int main()
4  {
5      //declaration of variables
6      int a;
7      //to print subtraction of two numbers
8      printf("Enter an integer:");
9      scanf("%d",&a);
10     printf("you entered: %d", a);
11     return 0;
12 }
```

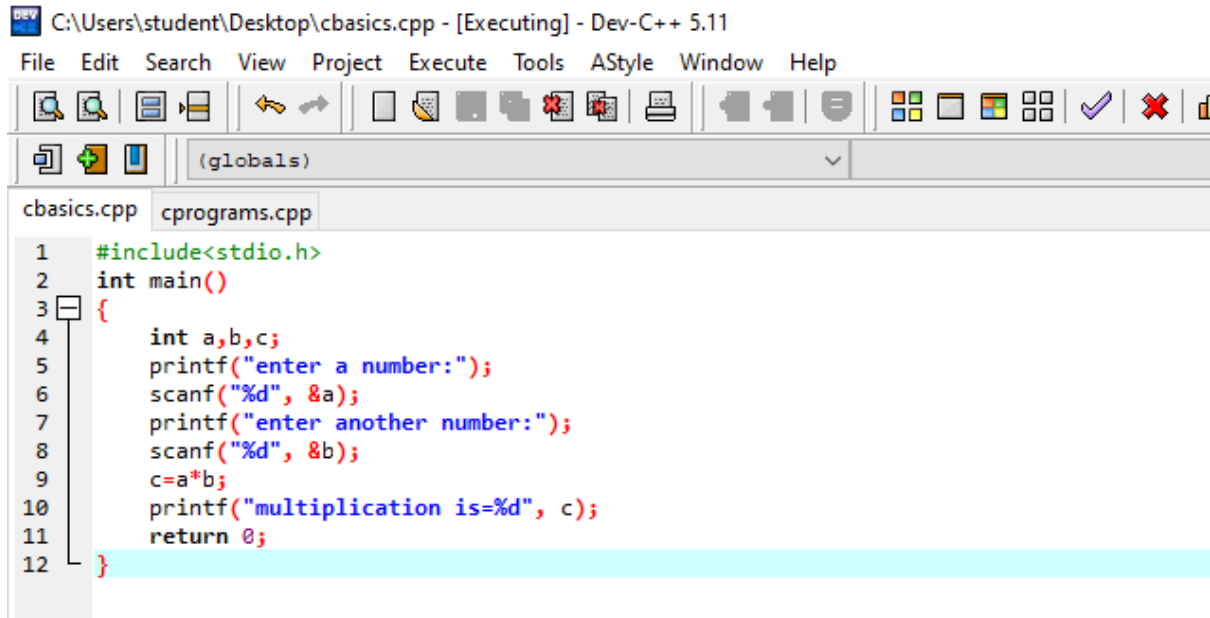
Output:

 C:\Users\student\Desktop\cprograms.exe

```
enter a value:789
enter b value:456
subtraction=333
-----
Process exited after 4.992 seconds with return value 0
Press any key to continue . . .
```

Basic C Programs

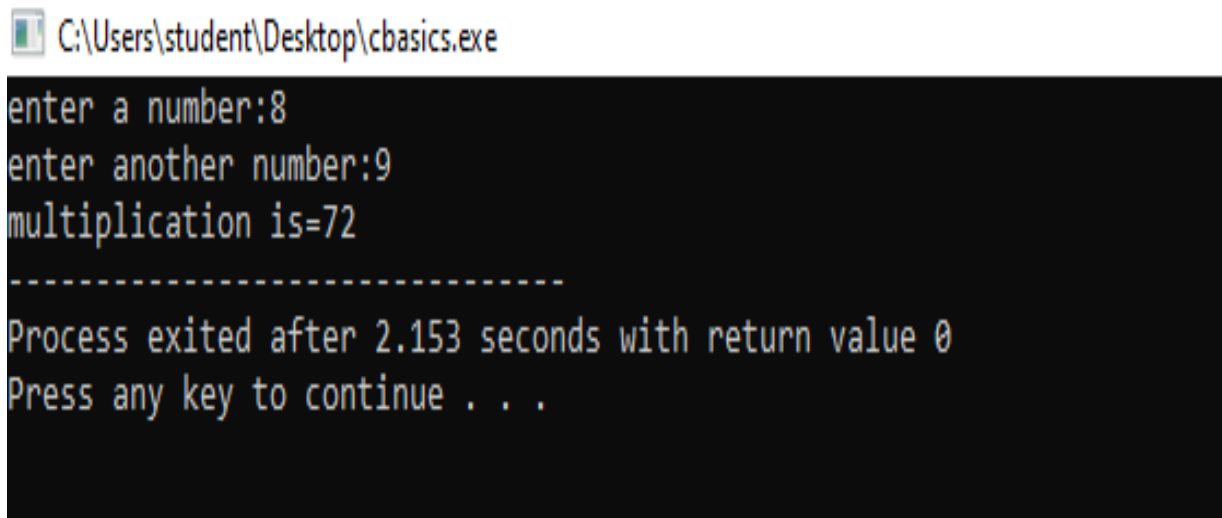
4. C Program for the Multiplication of two given numbers



The screenshot shows the Dev-C++ 5.11 IDE with the file 'cbasics.cpp' open. The code is as follows:

```
1  #include<stdio.h>
2  int main()
3  {
4      int a,b,c;
5      printf("enter a number:");
6      scanf("%d", &a);
7      printf("enter another number:");
8      scanf("%d", &b);
9      c=a*b;
10     printf("multiplication is=%d", c);
11     return 0;
12 }
```

Output:

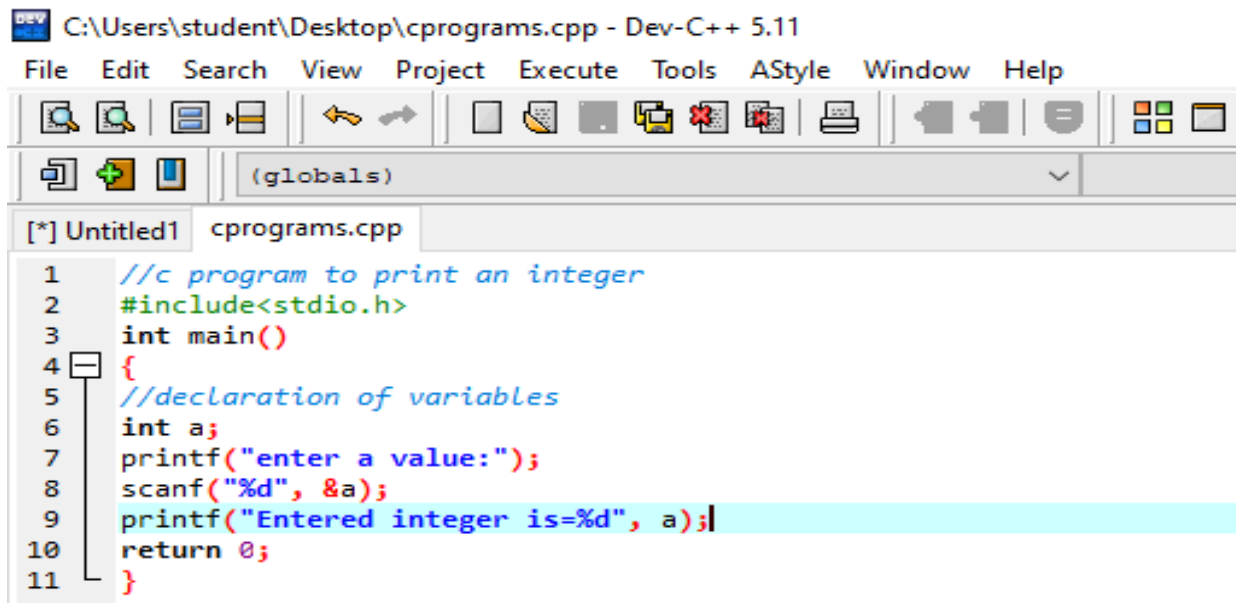


The screenshot shows the command prompt window with the following output:

```
C:\Users\student\Desktop\cbasics.exe
enter a number:8
enter another number:9
multiplication is=72
-----
Process exited after 2.153 seconds with return value 0
Press any key to continue . . .
```

Basic C Programs


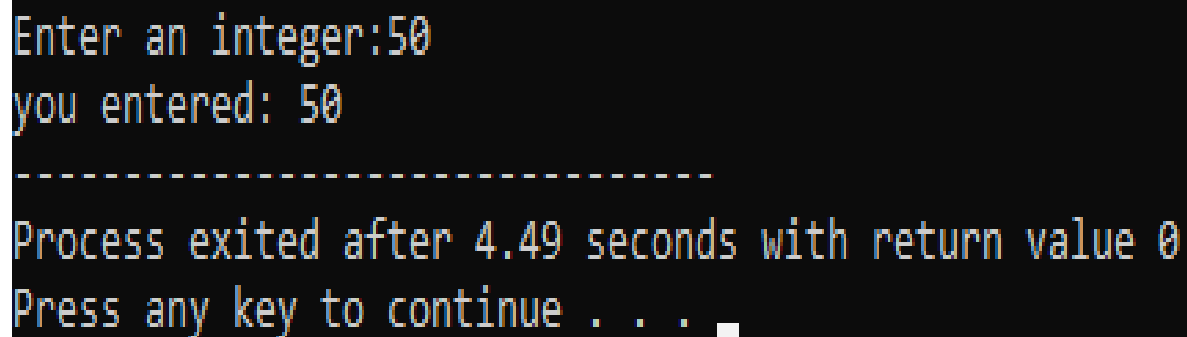
5. C Program to print an integer:



The screenshot shows the Dev-C++ 5.11 IDE interface. The title bar reads "C:\Users\student\Desktop\cprograms.cpp - Dev-C++ 5.11". The menu bar includes File, Edit, Search, View, Project, Execute, Tools, AStyle, Window, and Help. The toolbar contains various icons for file operations and execution. The toolbar below the menu bar shows a dropdown menu with "(globals)" selected. The main editor window has a tab labeled "[*] Untitled1" and the filename "cprograms.cpp". The code is as follows:

```
1 //c program to print an integer
2 #include<stdio.h>
3 int main()
4 {
5     //declaration of variables
6     int a;
7     printf("enter a value:");
8     scanf("%d", &a);
9     printf("Entered integer is=%d", a);|
10    return 0;
11 }
```

Output:

 C:\Users\student\Desktop\cprograms.exe

Enter an integer:50
you entered: 50


Process exited after 4.49 seconds with return value 0
Press any key to continue . . .

Basic C Programs

6. C Program to print a float:

```
[*] Untitled1  [*] cprograms.cpp
1  //c program to print float
2  #include<stdio.h>
3  int main()
4  {
5      //declaration of variables
6      float a;
7      //to print float variable
8      printf("Enter an float:");
9      scanf("%f",&a);
10     printf("you entered float: %f", a);
11     return 0;
12 }
```

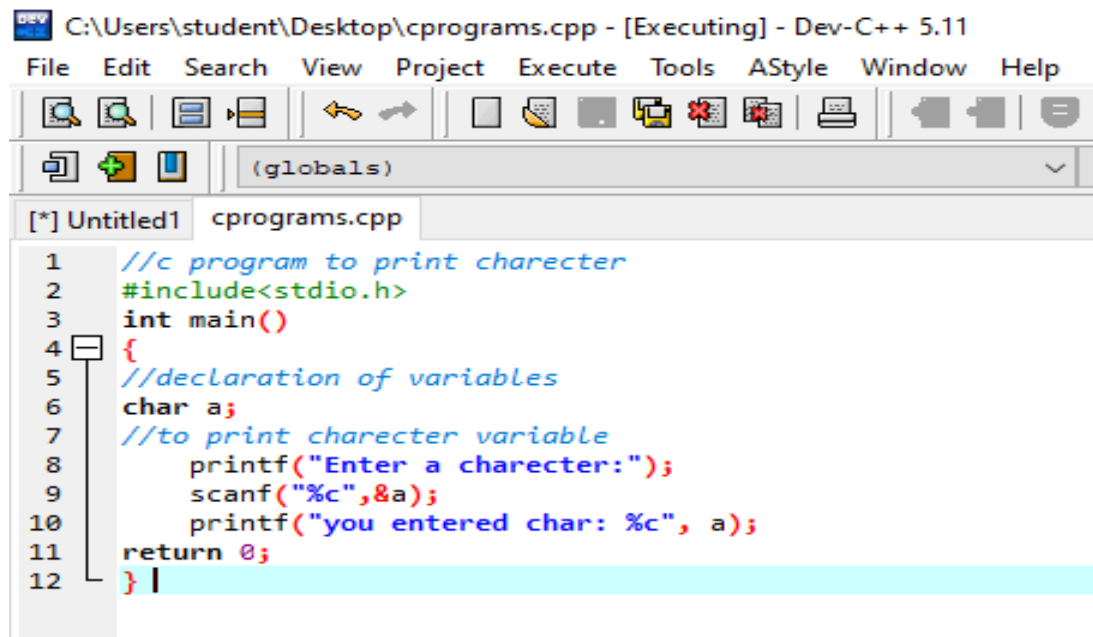
Output:

 C:\Users\student\Desktop\cprograms.exe

```
Enter an float:9.4
you entered float: 9.400000
-----
Process exited after 3.466 seconds with return value 0
Press any key to continue . . .
```

Basic C Programs

7. C Program to print a Character:



The screenshot shows the Dev-C++ 5.11 IDE with the file 'cprograms.cpp' open. The code is as follows:

```
1 //c program to print charecter
2 #include<stdio.h>
3 int main()
4 {
5     //declaration of variables
6     char a;
7     //to print charecter variable
8     printf("Enter a charecter:");
9     scanf("%c",&a);
10    printf("you entered char: %c", a);
11    return 0;
12 }
```

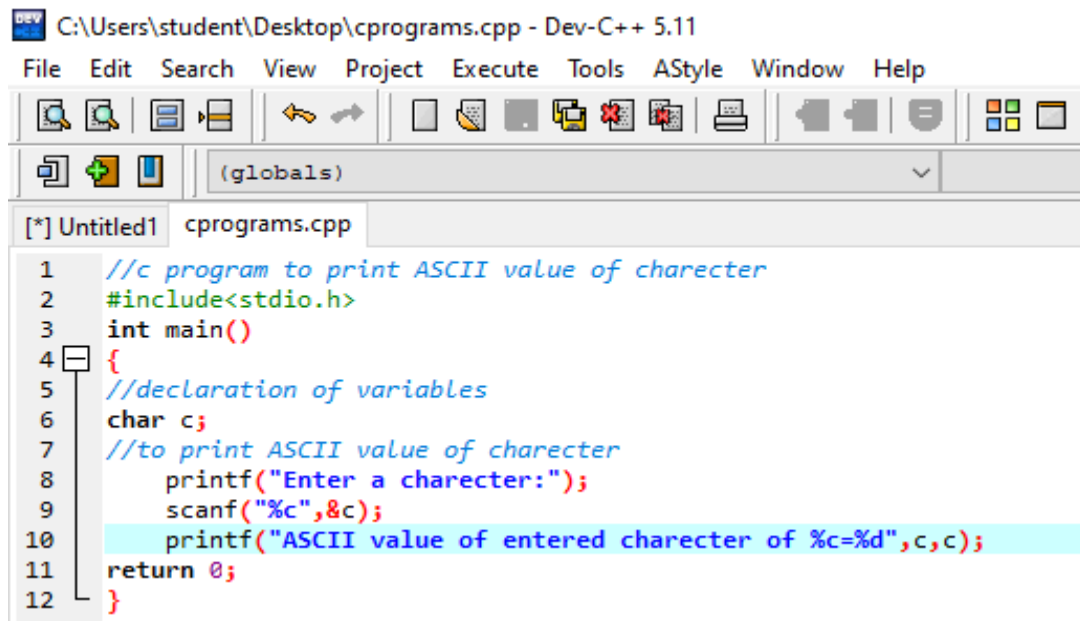
Output:

C:\Users\student\Desktop\cprograms.exe

```
Enter a charecter:pooja
you entered char: p
-----
Process exited after 2.643 seconds with return value 0
Press any key to continue . . .
```

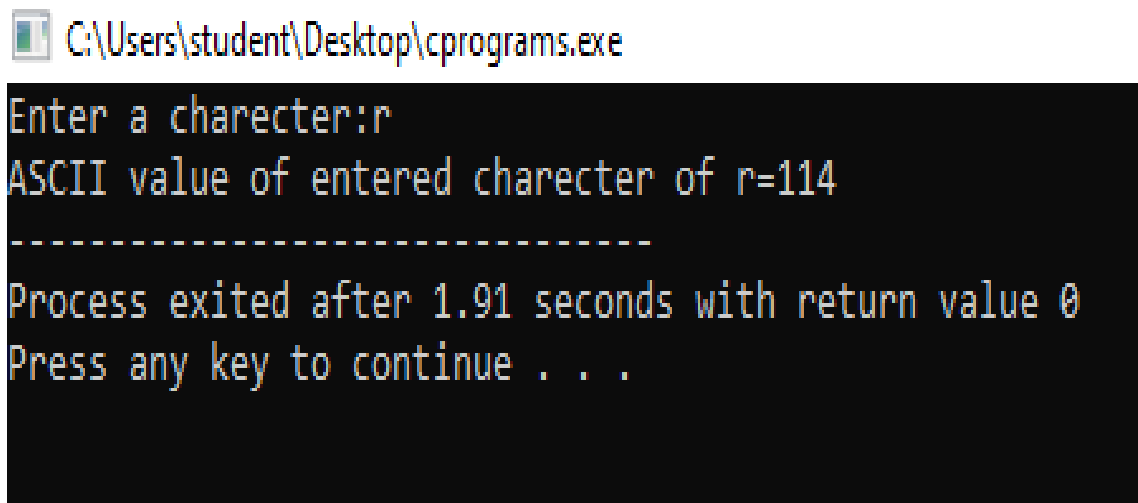
Basic C Programs

8. C Program to print ASCII value of the given Character:



```
C:\Users\student\Desktop\cprograms.cpp - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
[(*] Untitled1 cprograms.cpp
1 //c program to print ASCII value of charecter
2 #include<stdio.h>
3 int main()
4 {
5 //declaration of variables
6 char c;
7 //to print ASCII value of charecter
8 printf("Enter a charecter:");
9 scanf("%c",&c);
10 printf("ASCII value of entered charecter of %c=%d",c,c);
11 return 0;
12 }
```

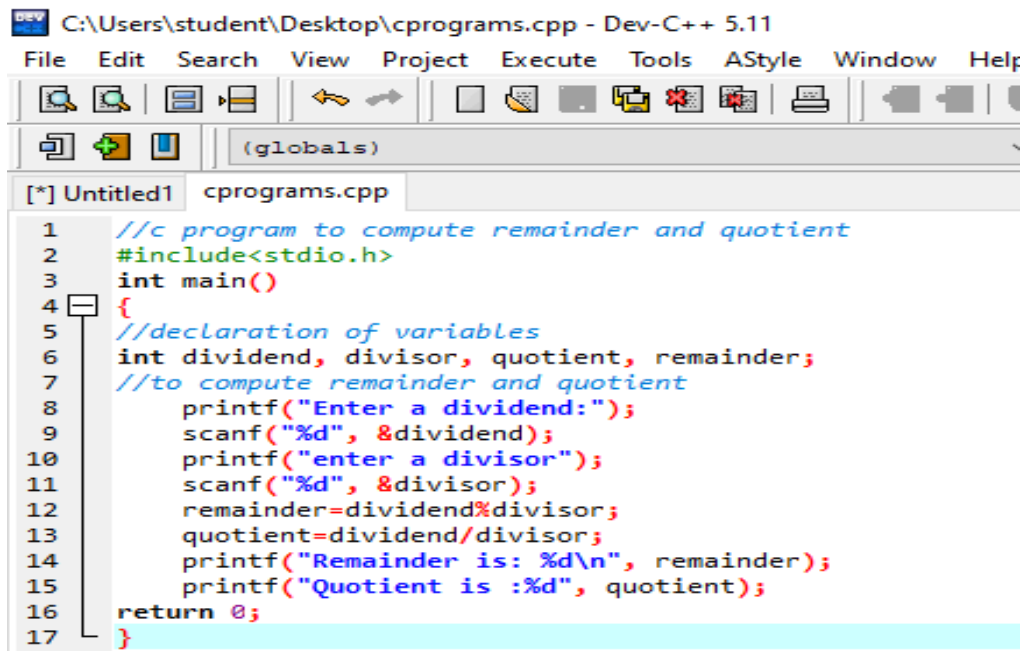
Output:



```
C:\Users\student\Desktop\cprograms.exe
Enter a charecter:r
ASCII value of entered charecter of r=114
-----
Process exited after 1.91 seconds with return value 0
Press any key to continue . . .
```

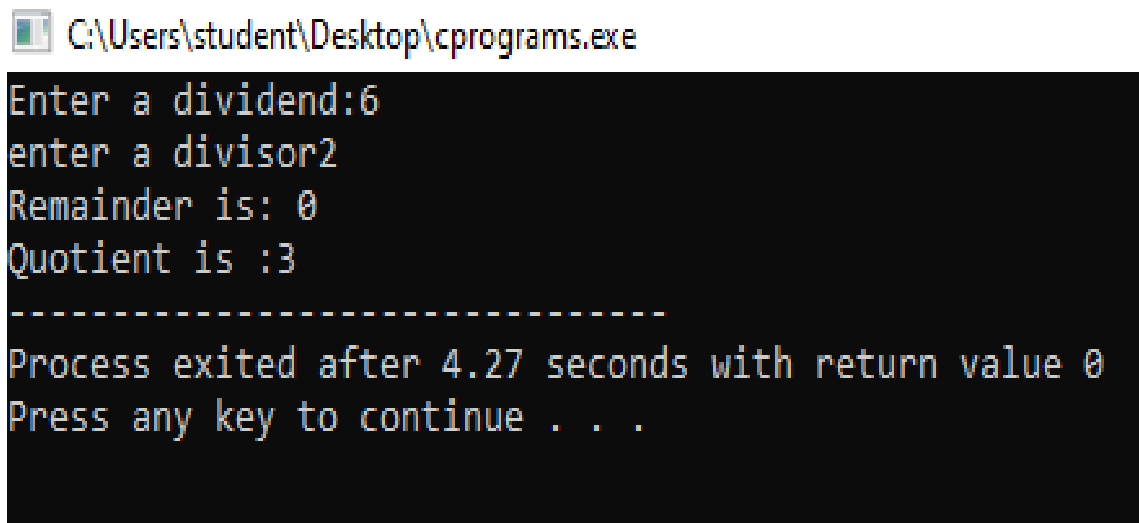

Basic C Programs

9. C Program to Compute remainder and Quotient:



```
C:\Users\student\Desktop\cprograms.cpp - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
[(*] Untitled1 cprograms.cpp
1 //c program to compute remainder and quotient
2 #include<stdio.h>
3 int main()
4 {
5     //declaration of variables
6     int dividend, divisor, quotient, remainder;
7     //to compute remainder and quotient
8     printf("Enter a dividend:");
9     scanf("%d", &dividend);
10    printf("enter a divisor");
11    scanf("%d", &divisor);
12    remainder=dividend%divisor;
13    quotient=dividend/divisor;
14    printf("Remainder is: %d\n", remainder);
15    printf("Quotient is :%d", quotient);
16    return 0;
17 }
```

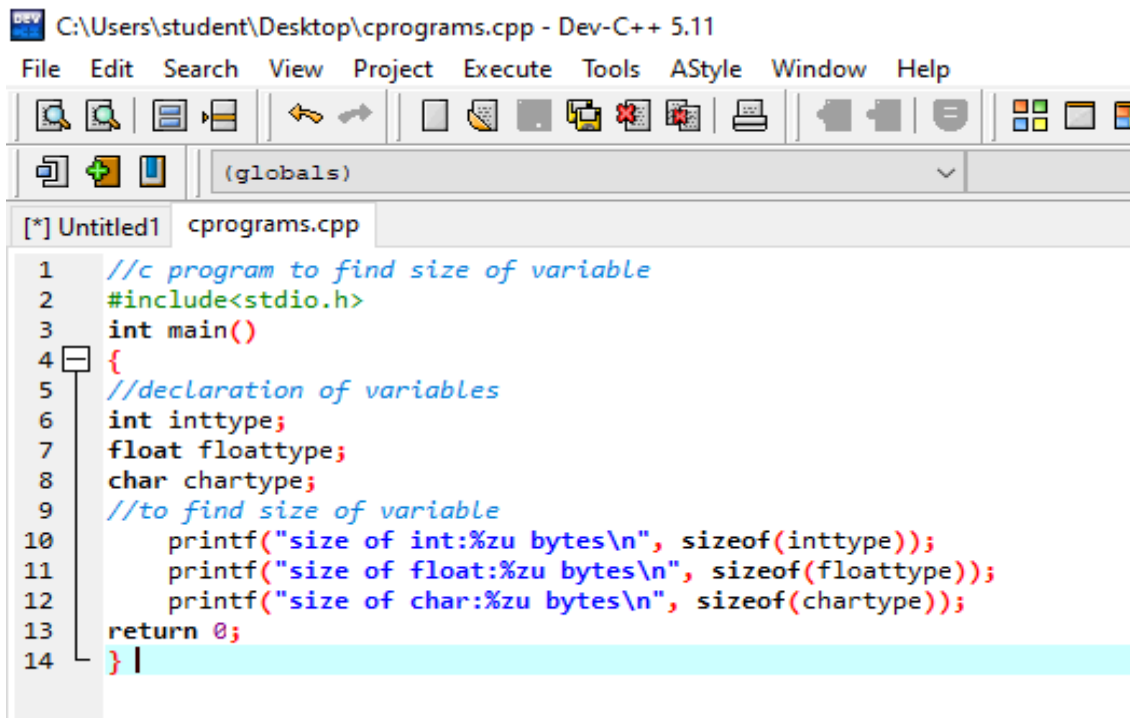
Output:



```
C:\Users\student\Desktop\cprograms.exe
Enter a dividend:6
enter a divisor2
Remainder is: 0
Quotient is :3
-----
Process exited after 4.27 seconds with return value 0
Press any key to continue . . .
```

Basic C Programs

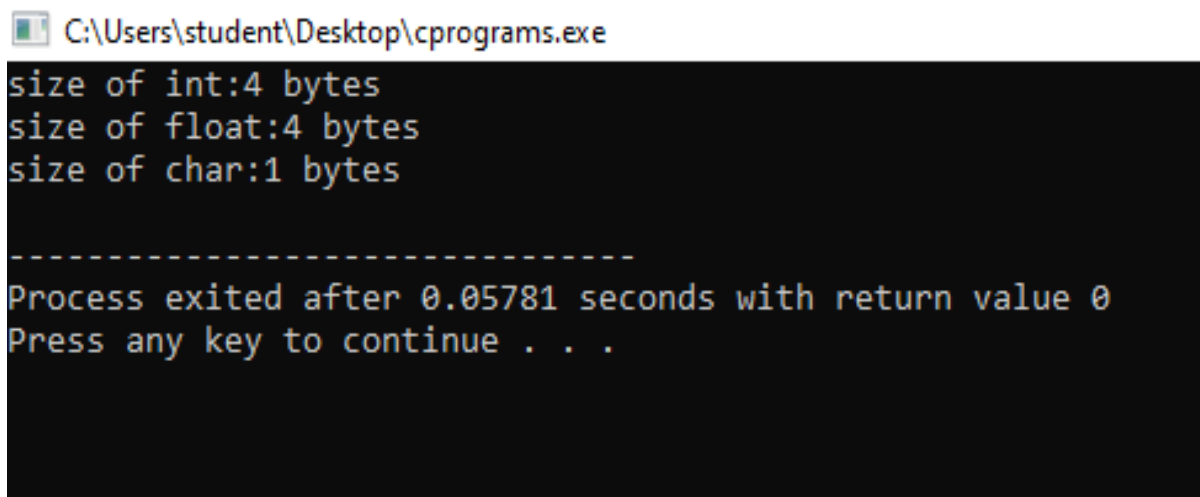
10. C Program to print Size of a Variable:



The screenshot shows the Dev-C++ 5.11 IDE with a file named 'cprograms.cpp'. The code is as follows:

```
1 //c program to find size of variable
2 #include<stdio.h>
3 int main()
4 {
5     //declaration of variables
6     int inttype;
7     float floattype;
8     char chartype;
9     //to find size of variable
10    printf("size of int:%zu bytes\n", sizeof(inttype));
11    printf("size of float:%zu bytes\n", sizeof(floattype));
12    printf("size of char:%zu bytes\n", sizeof(chartype));
13    return 0;
14 }
```

Output:

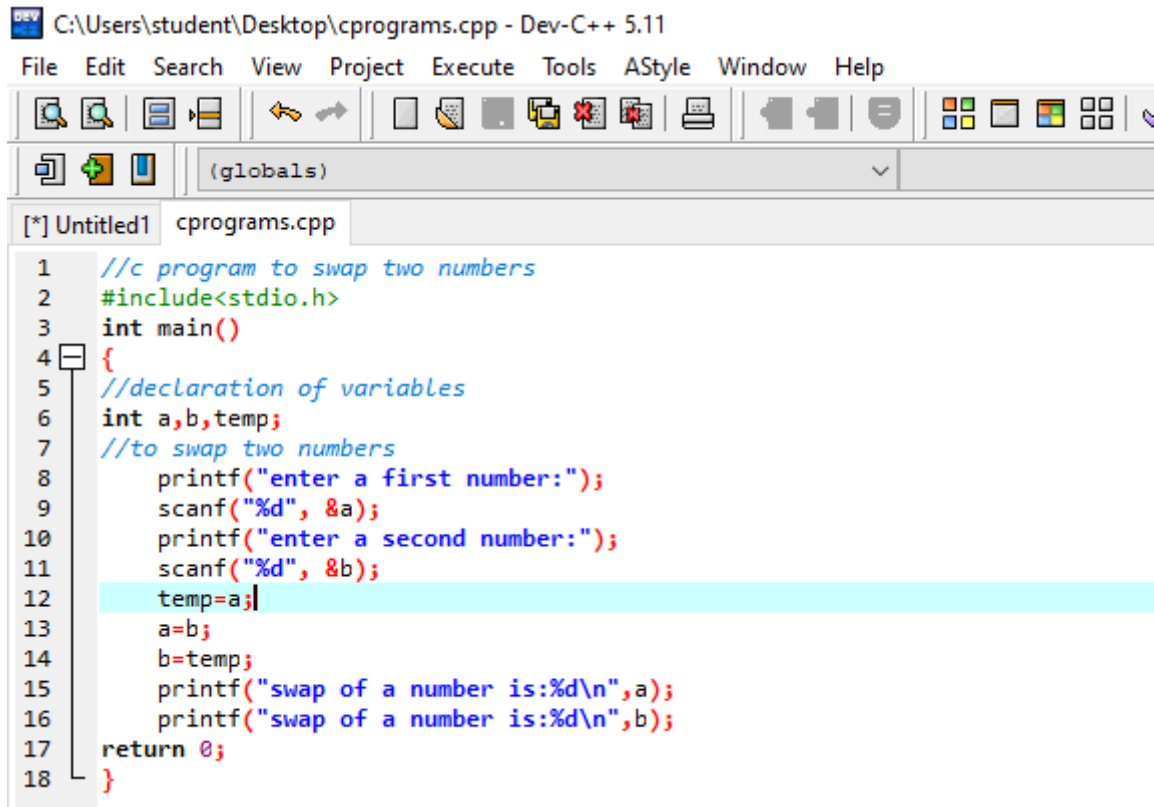


The screenshot shows the output of the program in a command prompt window. The output is as follows:

```
C:\Users\student\Desktop\cprograms.exe
size of int:4 bytes
size of float:4 bytes
size of char:1 bytes
-----
Process exited after 0.05781 seconds with return value 0
Press any key to continue . . .
```

Basic C Programs

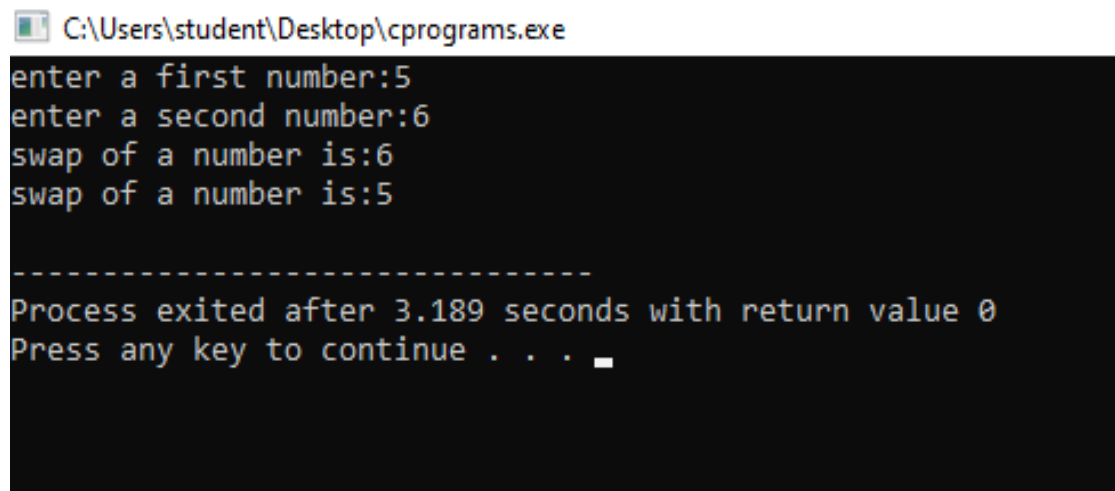
11. C Program to Swap two numbers:



The screenshot shows the Dev-C++ 5.11 IDE with a C program for swapping two numbers. The program uses `printf` and `scanf` for input/output and a temporary variable `temp` for the swap logic. The code is as follows:

```
1 //c program to swap two numbers
2 #include<stdio.h>
3 int main()
4 {
5     //declaration of variables
6     int a,b,temp;
7     //to swap two numbers
8     printf("enter a first number:");
9     scanf("%d", &a);
10    printf("enter a second number:");
11    scanf("%d", &b);
12    temp=a;
13    a=b;
14    b=temp;
15    printf("swap of a number is:%d\n",a);
16    printf("swap of a number is:%d\n",b);
17    return 0;
18 }
```

Output:



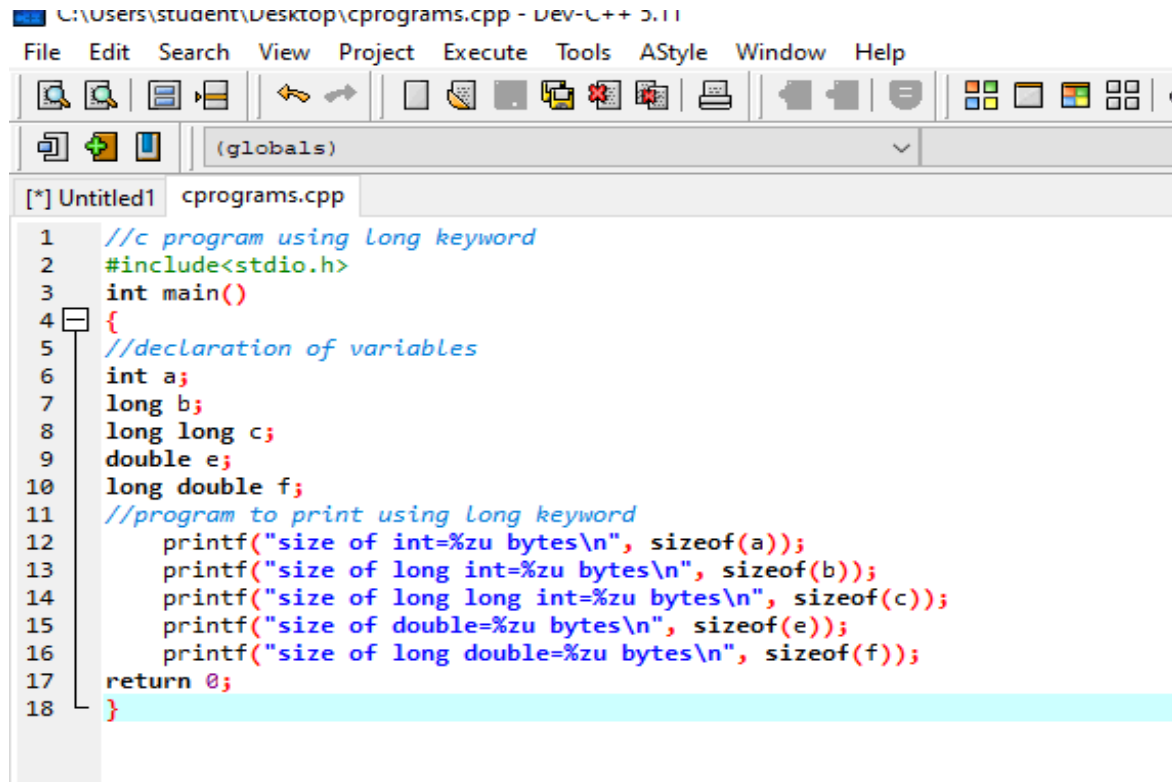
The screenshot shows the output of the program when executed. It prompts the user to enter two numbers, 5 and 6, and then displays the swapped values, 6 and 5. The program exits with a return value of 0.

```
C:\Users\student\Desktop\cprograms.exe
enter a first number:5
enter a second number:6
swap of a number is:6
swap of a number is:5

-----
Process exited after 3.189 seconds with return value 0
Press any key to continue . . .
```

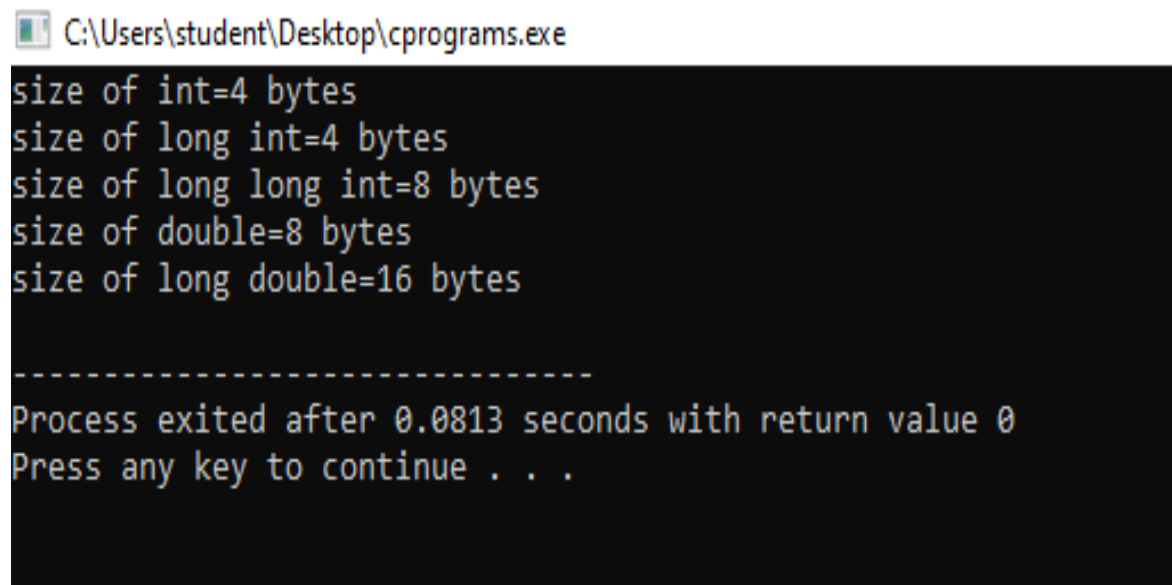
Basic C Programs

12.C Program using long keyword:



```
C:\Users\student\Desktop\cprograms.cpp - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
(globals)
[*] Untitled1 cprograms.cpp
1 //c program using long keyword
2 #include<stdio.h>
3 int main()
4 {
5 //declaration of variables
6 int a;
7 long b;
8 long long c;
9 double e;
10 long double f;
11 //program to print using long keyword
12 printf("size of int=%zu bytes\n", sizeof(a));
13 printf("size of long int=%zu bytes\n", sizeof(b));
14 printf("size of long long int=%zu bytes\n", sizeof(c));
15 printf("size of double=%zu bytes\n", sizeof(e));
16 printf("size of long double=%zu bytes\n", sizeof(f));
17 return 0;
18 }
```

Output:

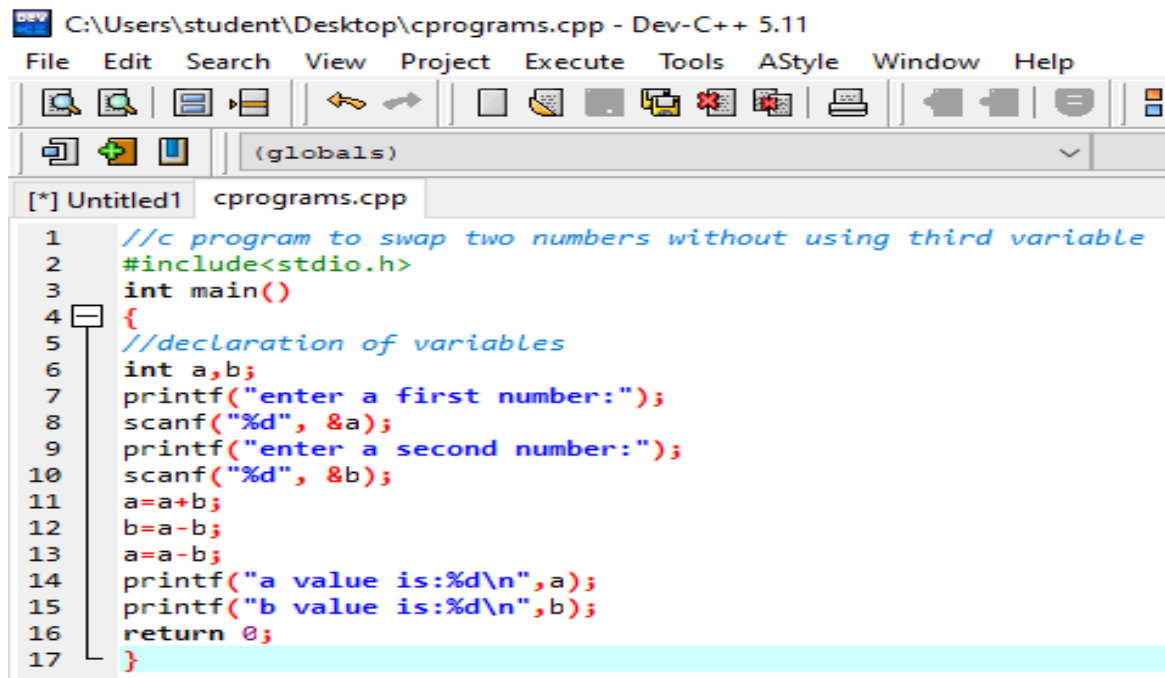


```
C:\Users\student\Desktop\cprograms.exe
size of int=4 bytes
size of long int=4 bytes
size of long long int=8 bytes
size of double=8 bytes
size of long double=16 bytes

-----
Process exited after 0.0813 seconds with return value 0
Press any key to continue . . .
```

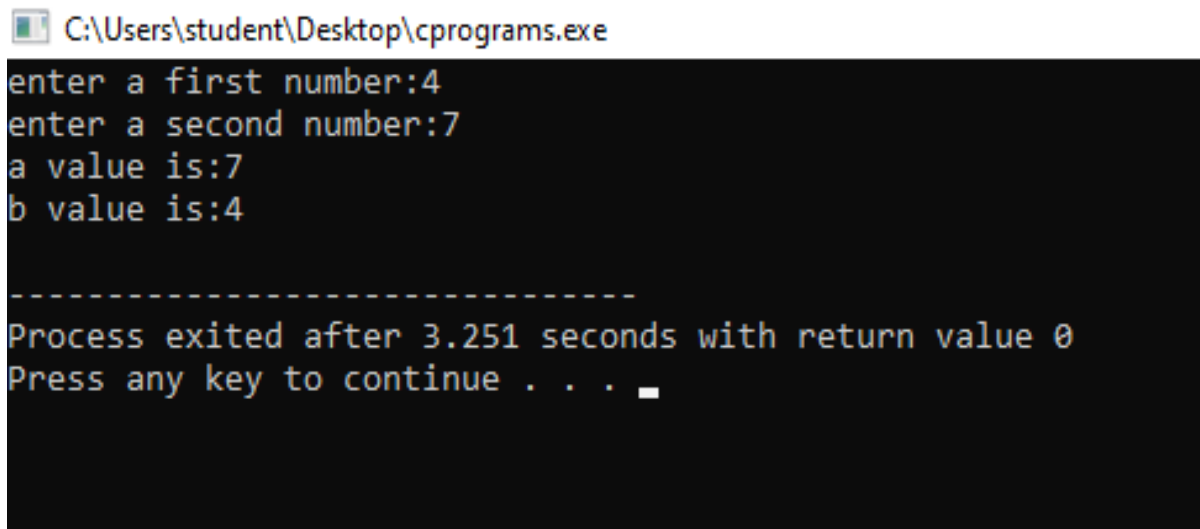
Basic C Programs

13.C Program to swap two numbers without using Third variable:



```
C:\Users\student\Desktop\cprograms.cpp - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
[(*] Untitled1 cprograms.cpp
1 //c program to swap two numbers without using third variable
2 #include<stdio.h>
3 int main()
4 {
5 //declaration of variables
6 int a,b;
7 printf("enter a first number:");
8 scanf("%d", &a);
9 printf("enter a second number:");
10 scanf("%d", &b);
11 a=a+b;
12 b=a-b;
13 a=a-b;
14 printf("a value is:%d\n",a);
15 printf("b value is:%d\n",b);
16 return 0;
17 }
```

Output:



```
C:\Users\student\Desktop\cprograms.exe
enter a first number:4
enter a second number:7
a value is:7
b value is:4


-----
Process exited after 3.251 seconds with return value 0
Press any key to continue . . .
```

Basic C Programs

14. C Program to print a person is eligible for vote or not

```
voting_eligibility.cpp
1 //write a c programm for a person is eligible for vote or not?
2 #include<stdio.h>
3 int main()
4 {
5     int age;
6     printf("your age is:");
7     scanf("%d",&age);
8     if(age>=18)
9     {
10         printf("you are eligible");
11     }
12     else
13     {
14         printf("you are not eligible");
15     }
16 }
```

OUTPUT:

 C:\Users\rupika\Documents\voting_eligibility.exe

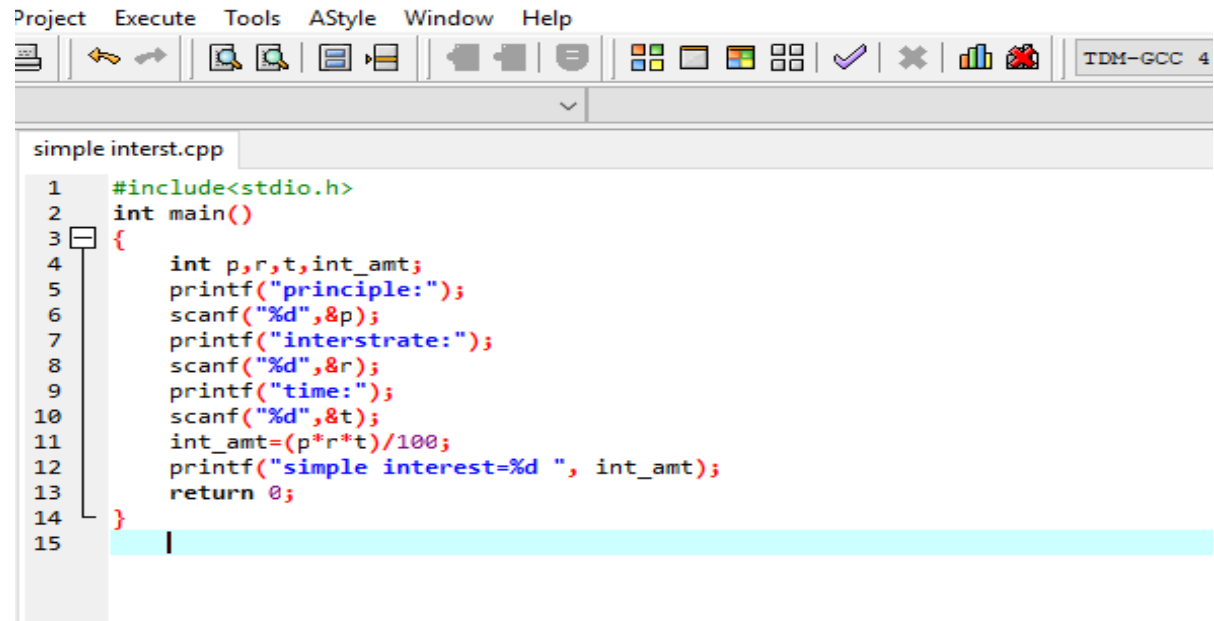
```
your age is:21
you are eligible
```

```
Process exited after 2.474 seconds with return value 0
Press any key to continue . . .
```

Basic C Programs

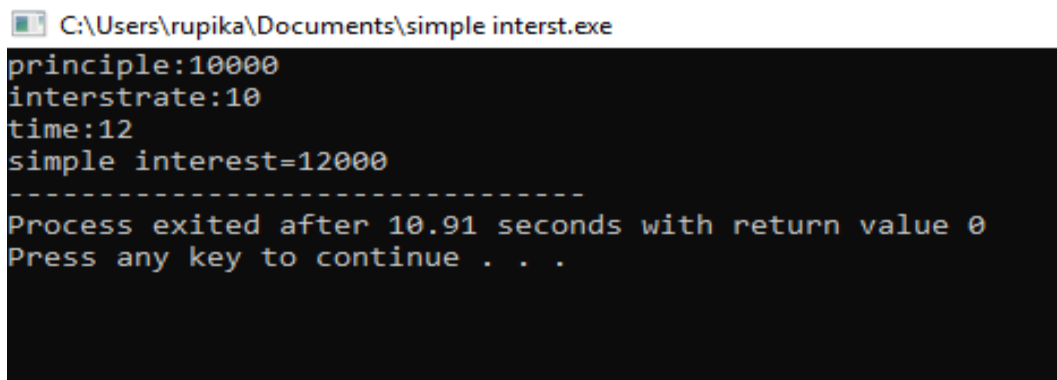
15. C Programs to print simple interest

ts\simple interst.cpp - Dev-C++ 5.11



```
1  #include<stdio.h>
2  int main()
3  {
4      int p,r,t,int_amt;
5      printf("principle:");
6      scanf("%d",&p);
7      printf("interstrate:");
8      scanf("%d",&r);
9      printf("time:");
10     scanf("%d",&t);
11     int_amt=(p*r*t)/100;
12     printf("simple interest=%d ", int_amt);
13     return 0;
14 }
15
```

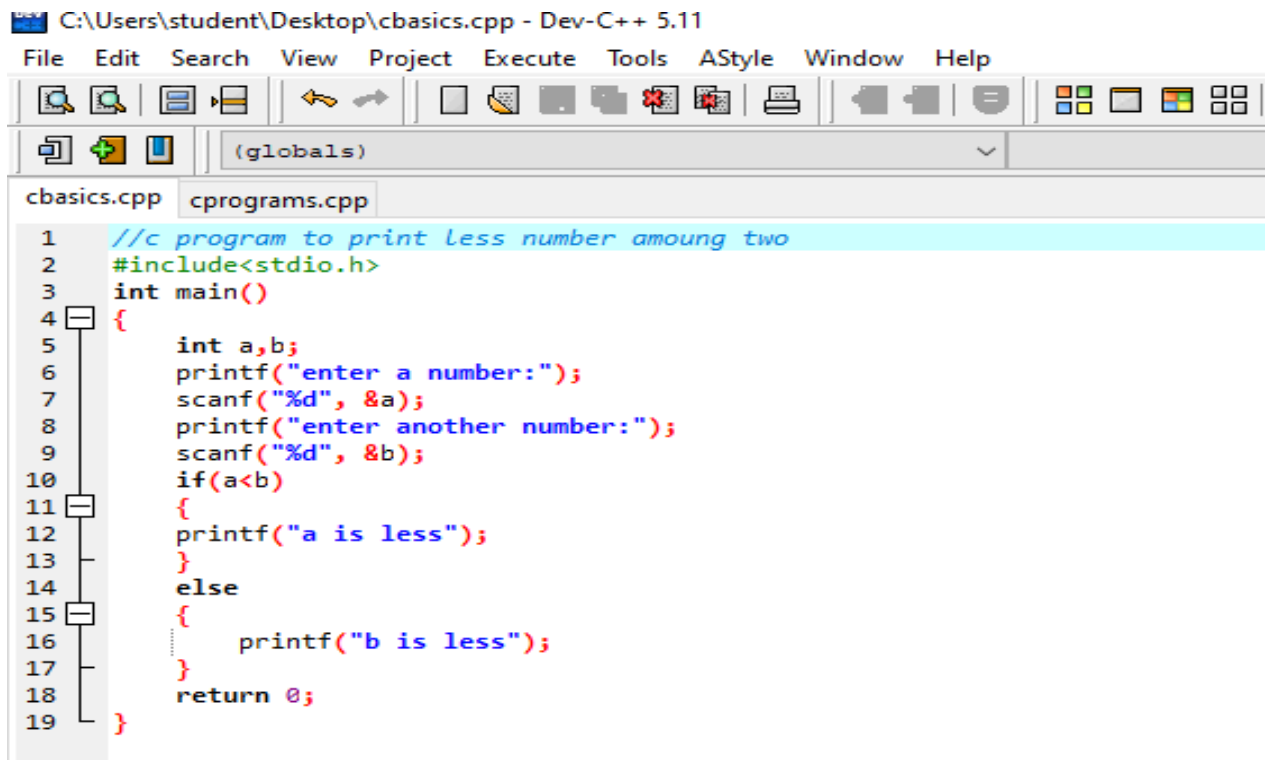
OUTPUT:



```
C:\Users\rupika\Documents\simple interst.exe
principle:10000
interstrate:10
time:12
simple interest=12000
-----
Process exited after 10.91 seconds with return value 0
Press any key to continue . . .
```

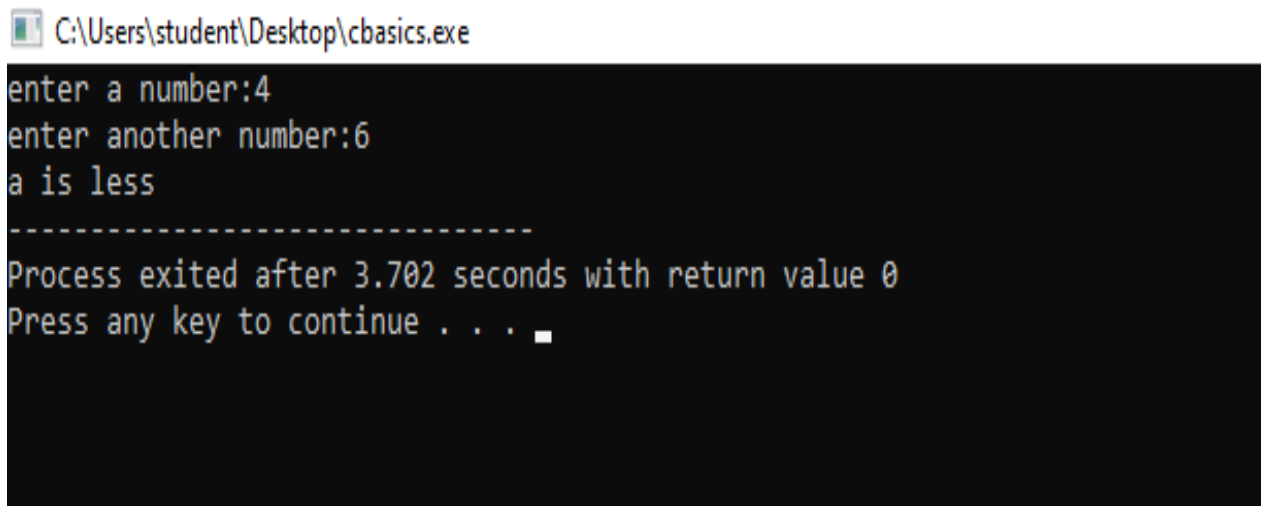
Basic C Programs

16. C Program to print smaller number among two numbers



```
C:\Users\student\Desktop\cbasics.cpp - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
(cbasics)
cbasics.cpp cprograms.cpp
1 //c program to print less number among two
2 #include<stdio.h>
3 int main()
4 {
5     int a,b;
6     printf("enter a number:");
7     scanf("%d", &a);
8     printf("enter another number:");
9     scanf("%d", &b);
10    if(a<b)
11    {
12        printf("a is less");
13    }
14    else
15    {
16        printf("b is less");
17    }
18    return 0;
19 }
```

OUTPUT:



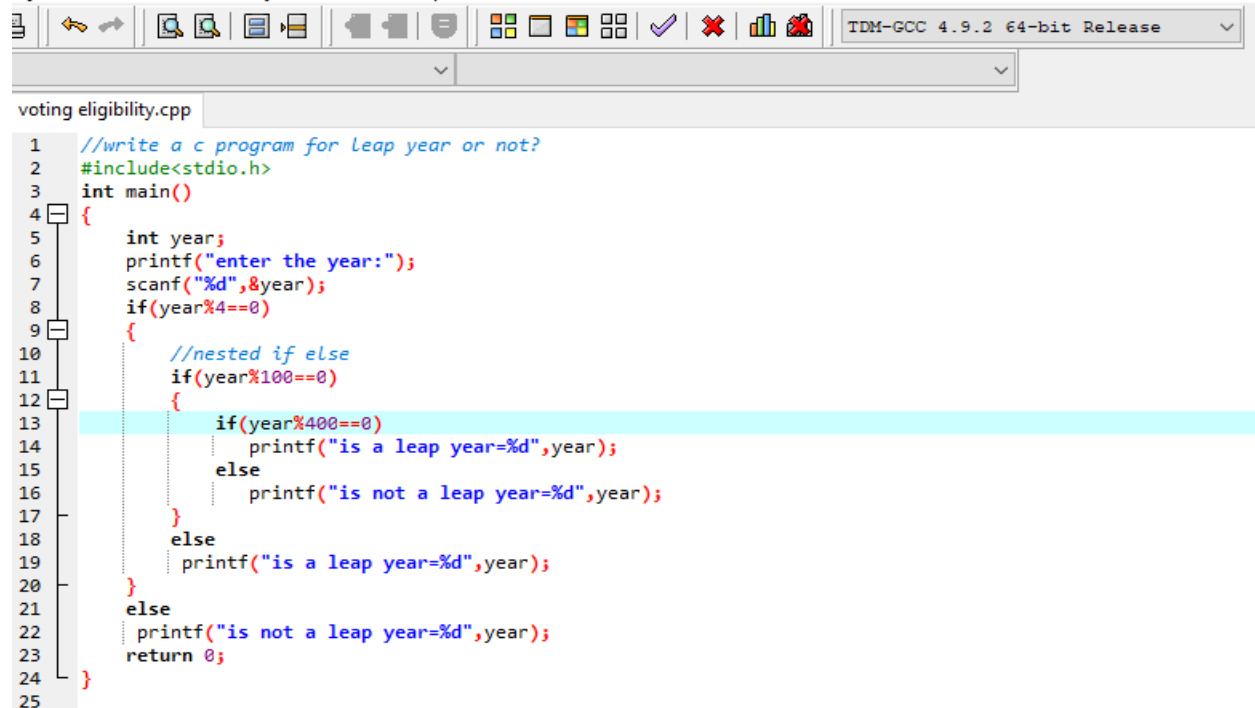
```
C:\Users\student\Desktop\cbasics.exe
enter a number:4
enter another number:6
a is less
-----
Process exited after 3.702 seconds with return value 0
Press any key to continue . . .
```


Basic C Programs

17. C Program to print leap year or not


\\voting eligibility.cpp - [Executing] - Dev-C++ 5.11

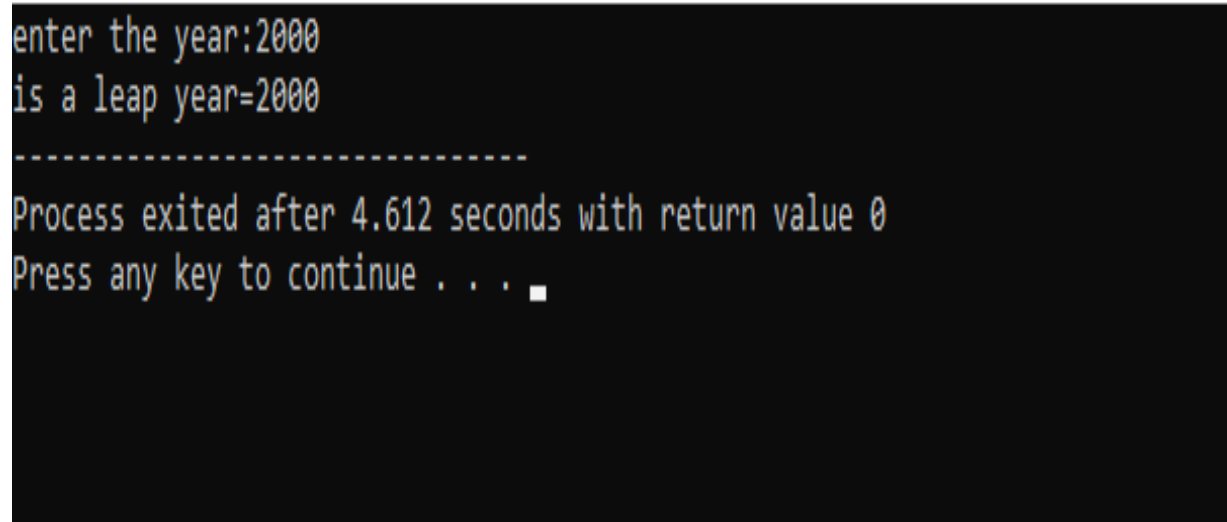
roject Execute Tools AStyle Window Help



```
1 //write a c program for leap year or not?
2 #include<stdio.h>
3 int main()
4 {
5     int year;
6     printf("enter the year:");
7     scanf("%d",&year);
8     if(year%4==0)
9     {
10        //nested if else
11        if(year%100==0)
12        {
13            if(year%400==0)
14                printf("is a leap year=%d",year);
15            else
16                printf("is not a leap year=%d",year);
17        }
18        else
19            printf("is a leap year=%d",year);
20    }
21    else
22        printf("is not a leap year=%d",year);
23    return 0;
24 }
25
```

OUTPUT:

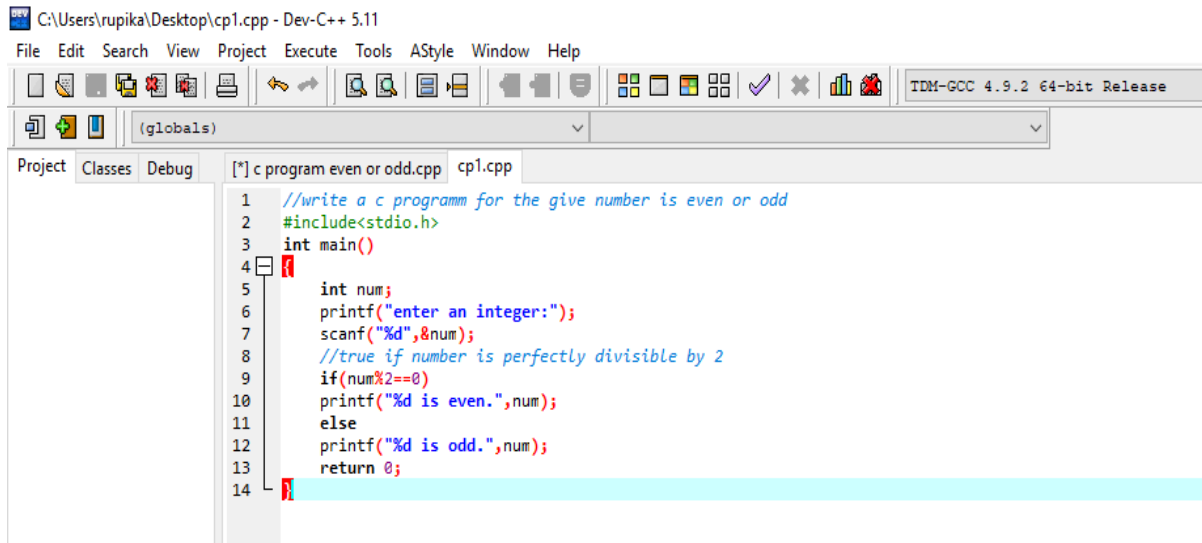
 C:\Users\rupika\Documents\voting eligibility.exe



```
enter the year:2000
is a leap year=2000
-----
Process exited after 4.612 seconds with return value 0
Press any key to continue . . .
```

Basic C Programs

18. C Program to print even or odd

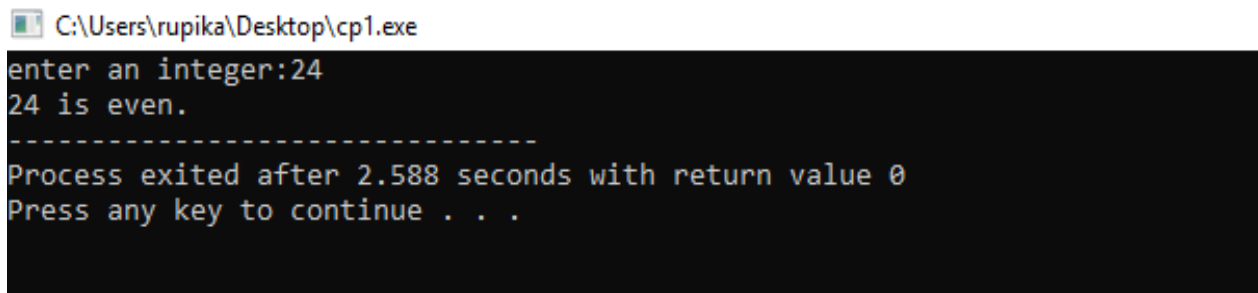


The screenshot shows the Dev-C++ IDE with the following details:

- File path: C:\Users\rupika\Desktop\cp1.cpp - Dev-C++ 5.11
- Menu bar: File, Edit, Search, View, Project, Execute, Tools, AStyle, Window, Help
- Toolbar: Standard IDE icons for file operations, editing, and execution.
- Compiler: TDM-GCC 4.9.2 64-bit Release
- Project Explorer: Shows a project named 'cp1.cpp'.
- Code Editor: Contains the following C code:

```
1 //write a c program for the give number is even or odd
2 #include<stdio.h>
3 int main()
4 {
5     int num;
6     printf("enter an integer:");
7     scanf("%d",&num);
8     //true if number is perfectly divisible by 2
9     if(num%2==0)
10    printf("%d is even.",num);
11    else
12    printf("%d is odd.",num);
13    return 0;
14 }
```

OUTPUT:



The screenshot shows the output of the program in a command prompt window:

```
C:\Users\rupika\Desktop\cp1.exe
enter an integer:24
24 is even.
-----
Process exited after 2.588 seconds with return value 0
Press any key to continue . . .
```

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19. C Program To Check Whether Armstrong Or Not

```
1  /*C Program to check whether the given number is Armstrong number or not*/
2  #include <stdio.h>
3  int main()
4  {
5      int n,r,sum=0,temp;
6      printf("Enter the number:");
7      scanf("%d",&n);
8      temp=n;
9      while (n>0)
10     {
11         r=n%10;
12         sum=sum+(r*r*r);
13         n=n/10;
14     }
15     if (temp==sum)
16         printf("The entered number is an armstrong number");
17     else
18         printf("The entered number is not an armstrong number");
19 }
20
```

OUTPUT:



C:\Users\POOJA.K\Desktop\Armstrong.exe

Enter the number:122

The entered number is not an armstrong number

Process exited after 8.125 seconds with return value 0

Press any key to continue . . .

Basic C Programs

20. C Program To Check Given Number is Palindrome or not

```
1  /*C Program to check whether the given number is Palindrome or not*/
2  #include <stdio.h>
3  int main()
4  {
5      int temp,n,r=0;
6      printf("Enter your number:");
7      scanf("%d",&n);
8      temp=n;
9      while (n!=0)
10     {
11         r=r*10;
12         r=r+n%10;
13         n=n/10;
14     }
15     if (temp==r)
16     {
17         printf("The entered number is Palindrome");
18     }
19     else
20     {
21         printf("The entered number is not Palindrome");
22     }
23 }
24
```

OUTPUT:



C:\Users\POOJA.K\Desktop\Palindrome.exe

Enter your number:1331

The entered number is Palindrome

Process exited after 5.8 seconds with return value 0


Press any key to continue . . .

Basic C Programs

21. C Program To Print Factorial Of a Number

```
1  /*C Program t print Factorial of a given number*/
2  #include <stdio.h>
3  int main()
4  {
5      int i,n,fact=1;
6      printf("Enter a number:");
7      scanf("%d",&n);
8      for (i=1;i<=n;i++)
9          fact=fact*i;
10     printf("The factorial of %d is:%d",n,fact);
11 }
12
```

OUTPUT:

 C:\Users\POOJA.K\Desktop\Factorial.exe

Enter a number:9

The factorial of 9 is:362880

Process exited after 4.515 seconds with return value 0

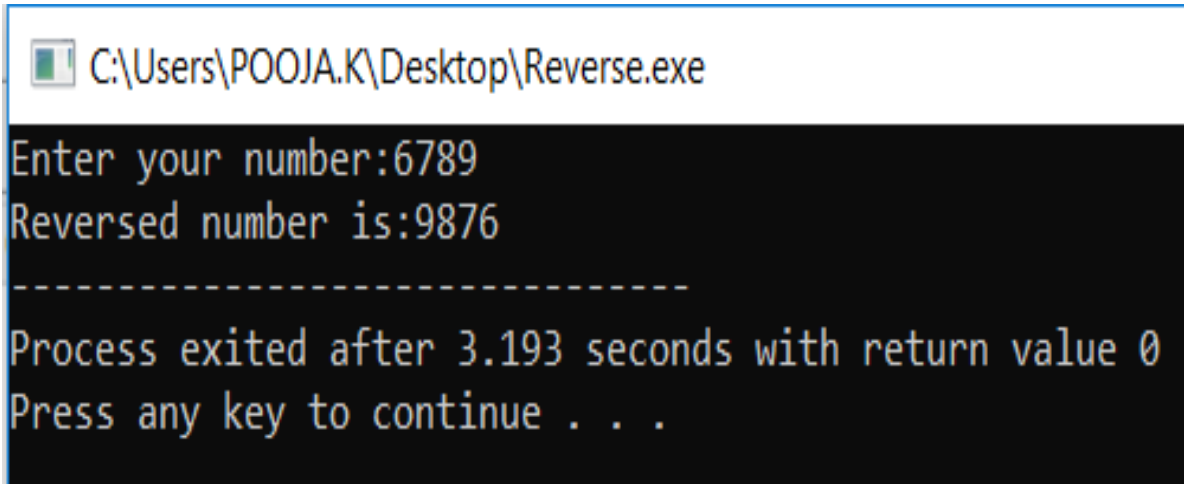
Press any key to continue . . . ■

Basic C Programs

22. C program to print reverse of entered number

```
1  /*C Program to print Reverse of the entered number*/
2  #include <stdio.h>
3  int main()
4  {
5      int n,r=0;
6      printf("Enter your number:");
7      scanf("%d",&n);
8      while (n!=0)
9      {
10         r=r*10;
11         r=r+n%10;
12         n=n/10;
13     }
14     printf("Reversed number is:%d",r);
15 }
16
```

OUTPUT:



The screenshot shows a Windows command prompt window with the title bar "C:\Users\POOJA.K\Desktop\Reverse.exe". The prompt displays the following text:

```
Enter your number:6789
Reversed number is:9876
-----
Process exited after 3.193 seconds with return value 0
Press any key to continue . . .
```

Basic C Programs