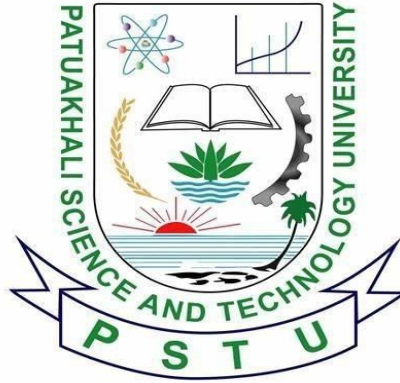


PATUAKHALI SCIENCE AND TECHNOLOGY UNIVERSITY



Course Code: CIT-112

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Chapter 5

Managing input and output operators.

5.1/6 double quote

5.2/6 comma.

5.3/6 both 2 and 3.

5.4/6 All above are truth.

5.6/6 All the above

True or false.

(a) False.

(b) False.

(c) True.

(d) False.

(e) False.

(f) False

(g) True.

(h) false.

(i) true.

(j) true.

(k) true.

Fill in the blanks.

- (a) Format
- (b) %lf
- (c) <ctype.h>
- (d) format specifier.
- (e) %x
- (h) wo
- (i) words
- (j) %e
- (k) %e and %S.
- (L)

Debugging exerci.

5.11 (a) city.

(b) city, amount.

(c) "%f", "%d"

(d) "\n%f".

(e) code, Root.

5.3/ (a) `getchar` is use to scan or read all the character from the user and `scanf` function is only for read one character.

(b) `%s` reads a string and on the other hand `%c` reads or write's a single character.

(c) `%.f` print a floating point number without exponent and `%e` print a floating point value either `e` type or `f` type depending on.

(d) `%s` can print one string given by the user and `%[]` read a string of words.

(e) `%e` print a floating point value with in exponent form. and `%.f` read a floating point value without exponent.

5.4/ (a) `%d`, `%c`, `%d`. (b) `%d`, `%.f`, `%x`

(c) `%d`, `%d`, `%d` (d) `%d`, `%s`, `%d`.

5.5/ (a) 10 x 723

(b) 1234 x 1.23

(c) 1234 456.00

(d) ~~1234~~ 00123.40"

(e) 1020 2371584.

5.6/ (a)

1988, x

(b)

x, 1988.

(c)

1988 x

(d)

x 1988.

5.7/ (a) 1275 235.75

(b) 1275

-235.74 00 00.

(c) 36576 790980.

(d) 1275 xxxx -235.74

(e) CAMBRIDGE.

(f) 1275 -10d 104-155.

5.8/ (a) there is no value assign in these variables year, amount.

(b) \n is out of double quote.

(c) " symble start but not end in the following printf function statement.

(d) no value assign in amount, code, year variables.

5.9/ output: 1988.

5.10/ By including single quotation over multiple character we can use getch() function.

5.11/ By including single quotation over multiple character we can use putchar() function.

5.12/ By scanf function we can read any kind of data like integer, float, double or character.

5.13/ It indicates what types of data we take as input.

5.14/ (a) value will be right justified.

(b) value will be left justified.

5.15/ It is used to show anything on output.

5.16/ It indicates what types of data we want to show on output.

5.17/ For scanning a data in a variable we need to add % sign in scanf function and on the other hand in printf we don't need % sign to get output in printf.

5.18/ (a) value will be right justified.

(b) value will be left justified.

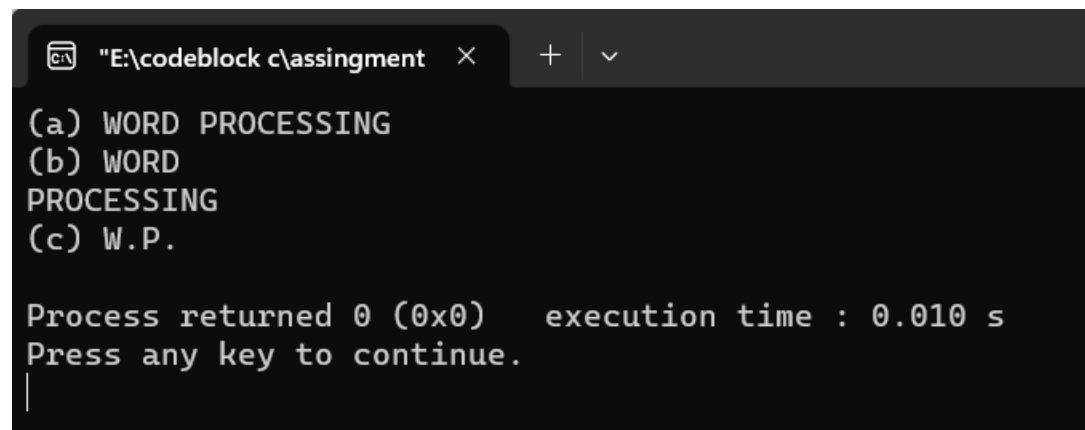
Chapter 5

5.1 Given the string “WORDPROCESSING”, write a program to read the string from the terminal and display the same in the following formats: (a) WORD PROCESSING (b) WORD PROCESSING (c) W.P

```
#include<stdio.h>

int main()
{
    char x[100]="WORD";
    char y[100]="PROCESSING";
    printf("(a) %4s %10s\n",x,y);
    printf("(b) %s\n%s\n",x,y);
    printf("(c) %.1s.%.1s.\n",x,y);

}
```



```
"E:\codeblock c\assignment" × + ▾
(a) WORD PROCESSING
(b) WORD
PROCESSING
(c) W.P.

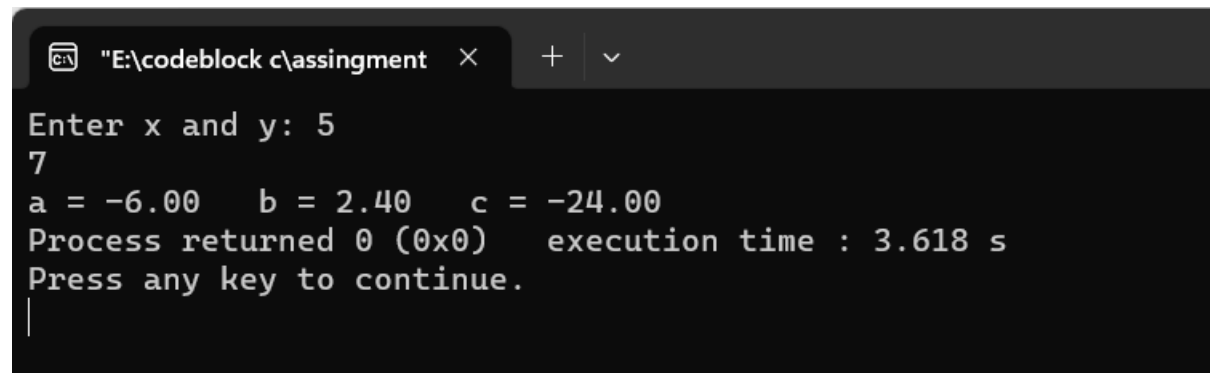
Process returned 0 (0x0)   execution time : 0.010 s
Press any key to continue.
|
```


5.2 Write a program to read the values of x and y and print the results of the following expressions in one line: (a) $(x+y)/(x-y)$ (b) $(x+y)/2$ (c) $(x+y)(x-y)$

```
#include<stdio.h>

int main()
{
    float a,b,c,x,y;
    printf("Enter x and y: ");
    scanf("%f %f",&x,&y);
    a=(x+y)/(x-y);
    b=(x+y)/(x);
    c=(x+y)*(x-y);
    printf("a = %0.2f  ",a);
    printf("b = %0.2f  ",b);
    printf("c = %0.2f  ",c);

}
```



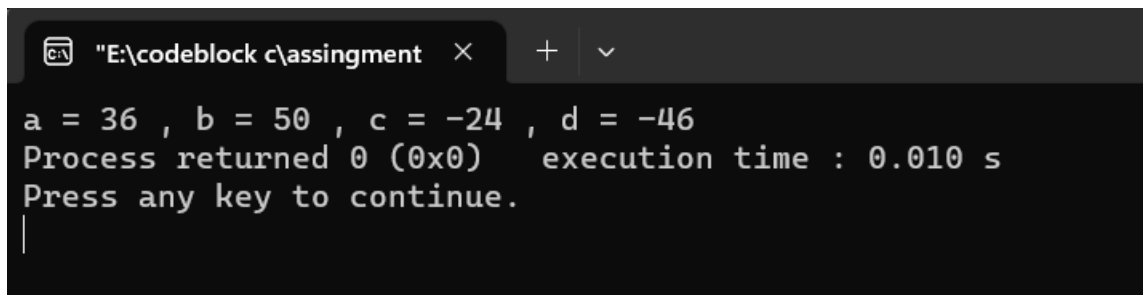
The screenshot shows a code editor window with a tab titled "E:\codeblock c\assingment". The terminal output is as follows:

```
Enter x and y: 5
7
a = -6.00    b = 2.40    c = -24.00
Process returned 0 (0x0)    execution time : 3.618 s
Press any key to continue.
|
```

5.3 Write a program to read the following numbers, round them off to the nearest integers and print out the results in integer form: 35.7 50.21 – 23.73 – 46.45

```
#include<stdio.h>

int main()
{
    int a=35.7+.5;
    int b=50.21+.5;
    int c=-(23.73+.5);
    int d=-(46.45+.5);
    printf("a = %d , b = %d , c = %d , d = %d",a,b,c,d);
}
```



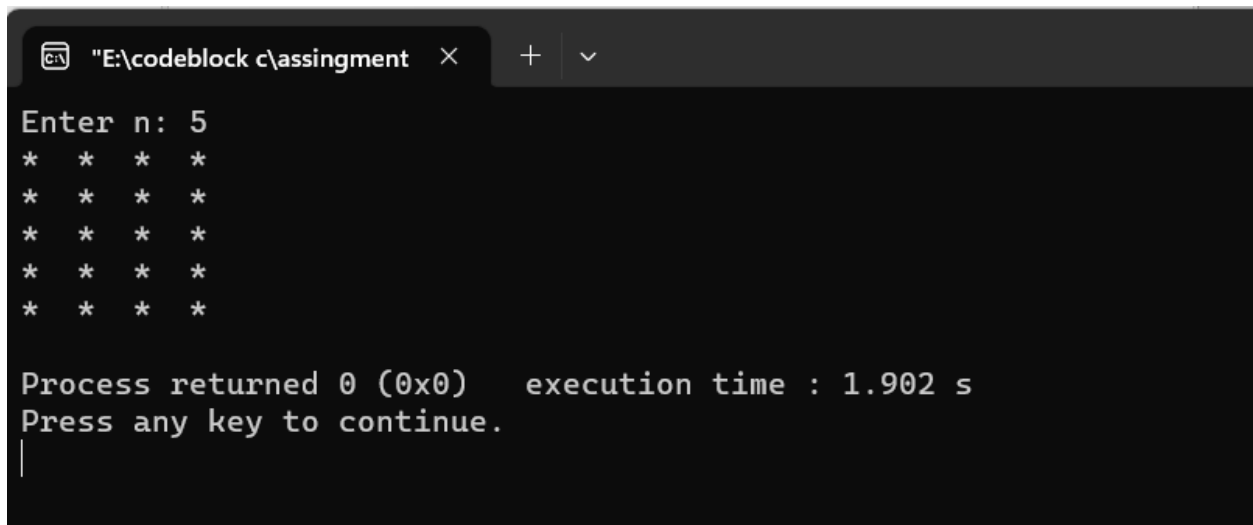
```
"E:\codeblock c\assingment" × + ▾
a = 36 , b = 50 , c = -24 , d = -46
Process returned 0 (0x0) execution time : 0.010 s
Press any key to continue.
|
```

5.4 Write a program which print n number of row and n number of column with * symbol

```
#include<stdio.h>

int main()
{
    int i,j,n;
    printf("Enter n: ");
    scanf("%d",&n);

    for(i=1;i<=n;i++)
    {
        for(j=1;j<=4;j++)
        {printf("* ");
        }
        printf("\n");
    }
}
```



```
E:\codeblock c\assingment  ×  +  ∨

Enter n: 5
* * * *
* * * *
* * * *
* * * *
* * * *

Process returned 0 (0x0)   execution time : 1.902 s
Press any key to continue.
|
```

5.5 Write an interactive program to demonstrate the process of multiplication. The program should ask the user to enter two two-digit integers and print the product of integers

```
#include<stdio.h>

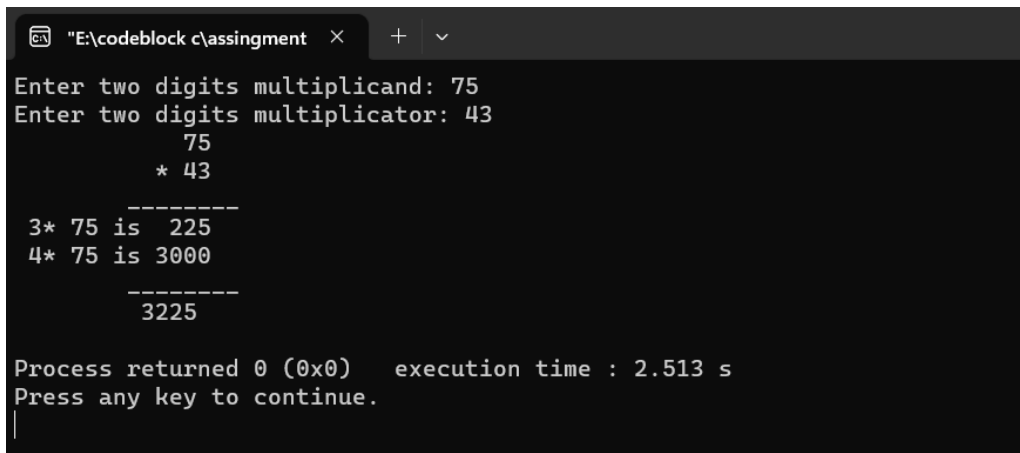
int main()
{
    int n,x;

    printf("Enter two digits multiplicand: ");
    scanf("%d",&n);

    printf("Enter two digits multiplier: ");
    scanf("%d",&x);

    int x1=x%10;
    int x2=x/10;
    int mul=n*x;

    printf("      %d\n",n);
    printf("      * %d\n",x);
    printf("      _____\n");
    printf(" %d* %d is %d\n",x1,n,x1*n);
    printf(" %d* %d is %d\n",x2,n,x2*n*10);
    printf("      _____\n");
    printf("      %d\n",mul);
}
```



The screenshot shows a code editor window titled "E:\codeblock c\assingment" with a tab for the C program. The program's output is displayed in a terminal window. It prompts the user to enter two digits for the multiplicand and multiplier. The user enters 75 and 43. The program then displays the multiplication process: 75 multiplied by 43, showing the partial products (3*75=225 and 4*75=3000) and the final result (3225). The terminal also shows the process returning 0 (0x0) with an execution time of 2.513 s and a prompt to press any key to continue.

```
"E:\codeblock c\assingment" x + v
Enter two digits multiplicand: 75
Enter two digits multiplier: 43
      75
      * 43
      -----
3* 75 is 225
4* 75 is 3000
      -----
      3225

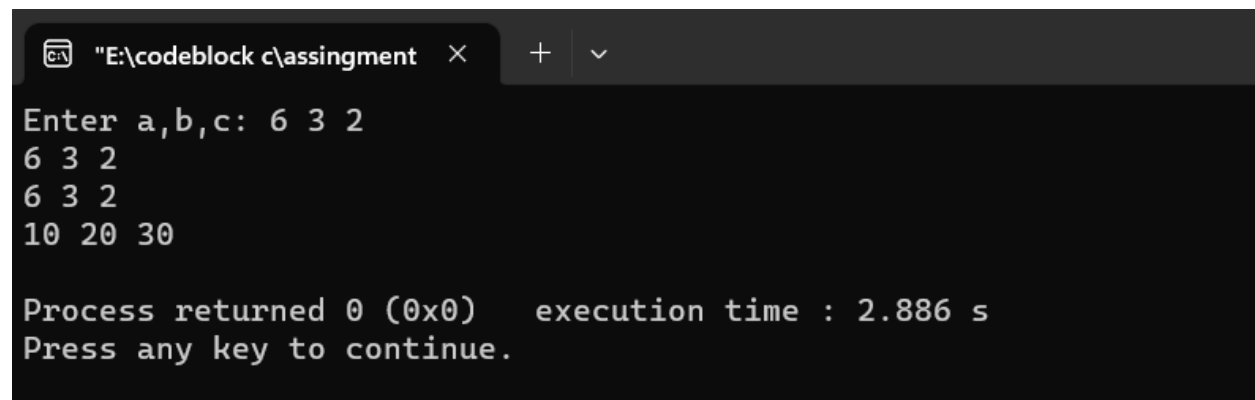
Process returned 0 (0x0)   execution time : 2.513 s
Press any key to continue.
|
```

5.6 Write a program to read three integers from the keyboard using one scanf statement and output them on one line using: (a) three printf statements, (b) only one printf with conversion specifiers, and (c) only one printf without conversion specifiers.

```
#include<stdio.h>

int main()
{
    int a,b,c;

    printf("Enter a,b,c: ");
    scanf("%d %d %d",&a,&b,&c);
    printf("%d ",a);
    printf("%d ",b);
    printf("%d \n",c);
    printf("%d %d %d\n",a,b,c);
    printf("10 20 30\n");
}
```



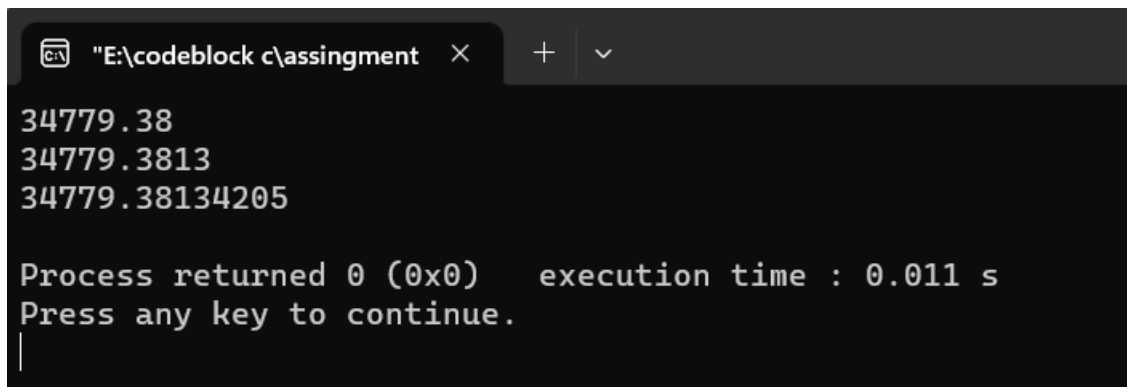
```
"E:\codeblock c\assingment" × + ▾
Enter a,b,c: 6 3 2
6 3 2
6 3 2
10 20 30

Process returned 0 (0x0)   execution time : 2.886 s
Press any key to continue.
```

5.7 Write a program that prints the value 10.45678 in exponential format with the following specifications: (a) correct to two decimal places; (b) correct to four decimal places; and (c) correct to eight decimal places.

```
#include<stdio.h>

int main()
{
    double x;
    x=exp(10.45678);
    printf("%0.2lf\n",x);
    printf("%0.4lf\n",x);
    printf("%0.8lf\n",x);
}
```



```
"E:\codeblock c\assingment" × + ▾
34779.38
34779.3813
34779.38134205

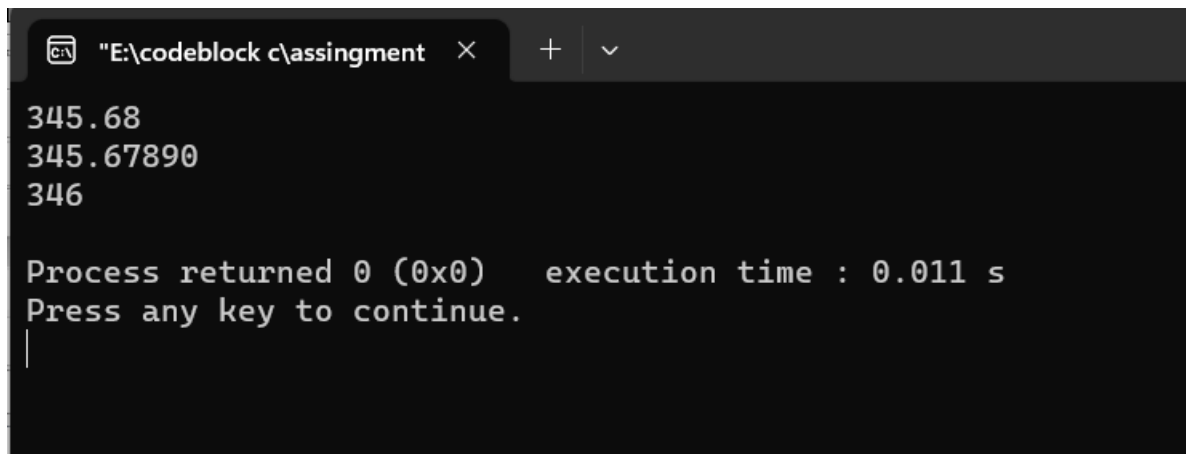
Process returned 0 (0x0)   execution time : 0.011 s
Press any key to continue.
|
```


5.8 Write a program to print the value 345.6789 in fixed-point format with the following specifications: (a) correct to two decimal places; (b) correct to five decimal places; and (c) correct to zero decimal places.

```
#include<stdio.h>

int main()
{
    double x=345.6789;
    printf("%.2f\n",x);
    printf("%.5f\n",x);
    printf("%.0f\n",x);

}
```



```
"E:\codeblock c\assingment" × + ▾
345.68
345.67890
346

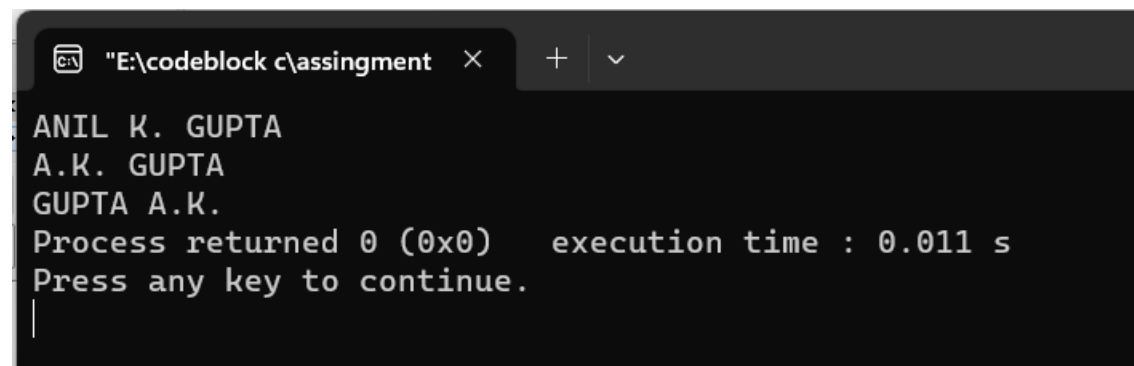
Process returned 0 (0x0)   execution time : 0.011 s
Press any key to continue.
|
```

5.9 Write a program to read the name ANIL KUMAR GUPTA in three parts using the scanf statement and to display the same in the following format using the printf statement. 5.3, 5.4 H] (a) ANIL K. GUPTA (b) A.K. GUPTA (c) GUPTA A.K.

```
#include<stdio.h>

int main()
{
    char x[100]="ANIL",y[100]="KUMAR",z[100]="GUPTA";
    printf("%s %.1s. %s\n",x,y,z);
    printf("%0.1s.%0.1s. %s\n",x,y,z);
    printf("%s %0.1s.%0.1s. ",z,x,y);

}
```



```
"E:\codeblock c\assingment" × + ▾
ANIL K. GUPTA
A.K. GUPTA
GUPTA A.K.
Process returned 0 (0x0)   execution time : 0.011 s
Press any key to continue.
|
```

5.10 Write a program with name code and price information:

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

```
int main()
```

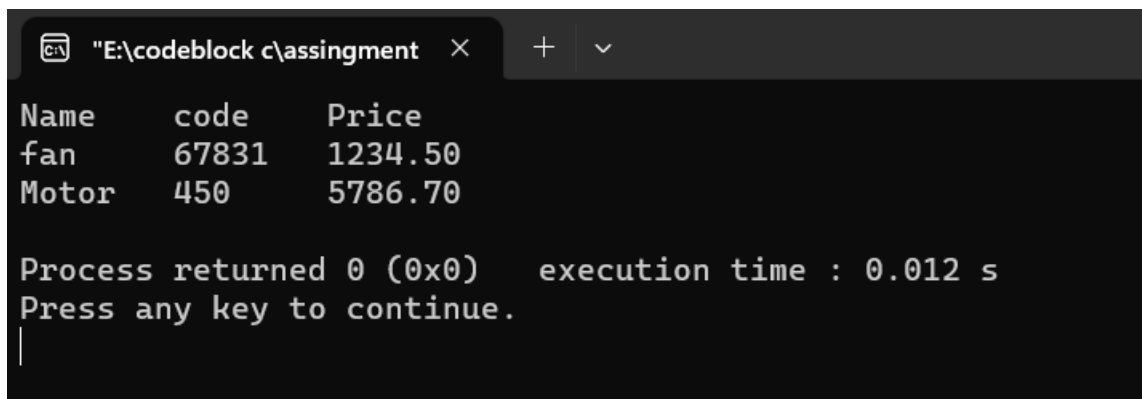
```
{
```

```
    printf("Name  code  Price\n");
```

```
    printf("fan   67831  1234.50\n");
```

```
    printf("Motor 450    5786.70\n");
```

```
}
```



The screenshot shows a terminal window with the title bar "E:\codeblock c\assingment". The output of the program is displayed as follows:

Name	code	Price
fan	67831	1234.50
Motor	450	5786.70

Below the table, the terminal shows the message "Process returned 0 (0x0) execution time : 0.012 s" and "Press any key to continue." with a cursor on the line below.

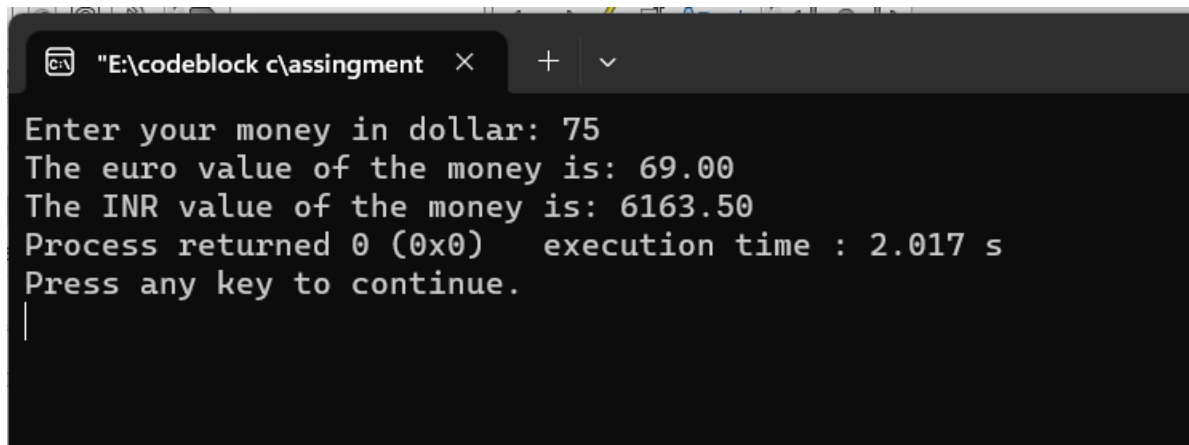
5.11 Problem

5.12 Problem

5.13 Write a C program to input a currency value in Dollars and display its equivalent Euro and INR amounts. You may use current exchange rate for conversion purpose.

```
#include<stdio.h>

int main()
{
    float euro,inr,dollars;
    printf("Enter your money in dollar: ");
    scanf("%f",&dollars);
    euro=dollars*0.92;
    inr=dollars*82.18;
    printf("The euro value of the money is: %0.2f\n",euro);
    printf("The INR value of the money is: %0.2f",inr);
}
```



```
"E:\codeblock c\assingment" x + v
Enter your money in dollar: 75
The euro value of the money is: 69.00
The INR value of the money is: 6163.50
Process returned 0 (0x0)    execution time : 2.017 s
Press any key to continue.
|
```

5.14 Write a C program to display a pattern where 1st line will be 1 2 3 n than second line will be 1 2 3 (n-1) and go on and at last the line will be 1:

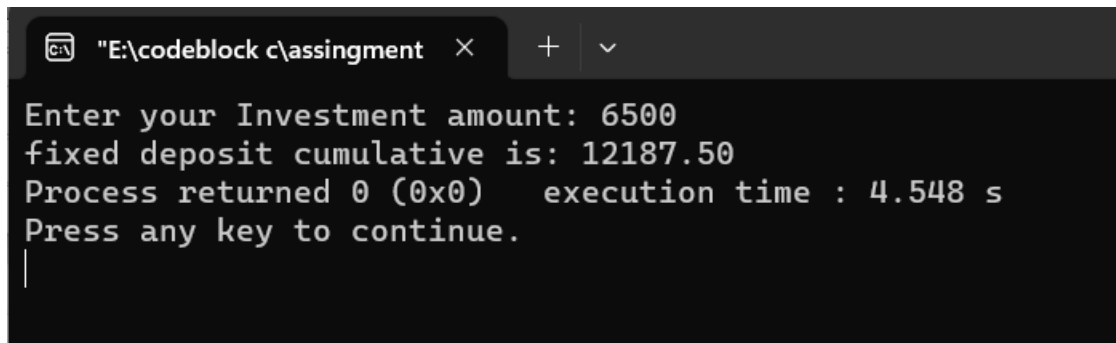
```
#include<stdio.h>

int main()
{
    int n,r,c;
    printf("Enter row number: ");
    scanf("%d",&n);
    for(r=n;r>=1;r--)
    {
        for(c=1;c<=n-r;c++)
        {
            printf(" ");
        }
        for(c=1;c<=r;c++)
        {
            printf("%d ",c);
        }
        printf("\n");
    }
}
```

5.15 Write a C program to input an investment amount and compute its fixed deposit cumulative return after 10 years at a rate of interest of 8.75%.

```
#include<stdio.h>

int main()
{
    float r=(8.75/100),p,n=10,i,c;
    printf("Enter your Investment amount: ");
    scanf("%f",&p);
    i=p*n*r;
    //c=fixed deposit cumulative;
    c=i+p;
    printf("fixed deposit cumulative is: %0.2f",c);
}
```



```
"E:\codeblock c\assingment" × + ▾
Enter your Investment amount: 6500
fixed deposit cumulative is: 12187.50
Process returned 0 (0x0)   execution time : 4.548 s
Press any key to continue.
|
```