

Institute of technology of Cambodia

Department of Information and Communication Engineering



TP2-Using scanf and math library

TP: Algorithm and Programming

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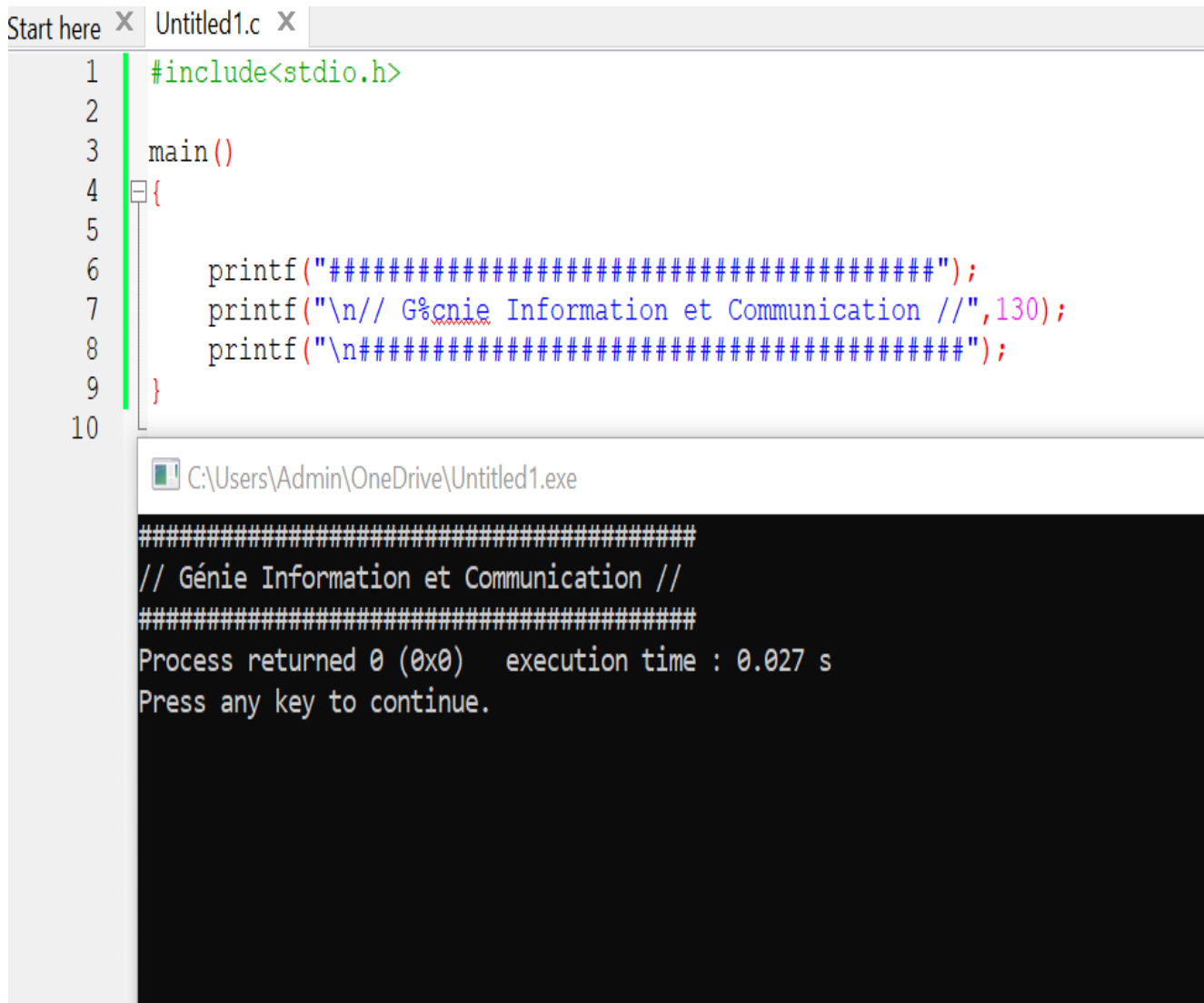
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TP2: Using scanf and math library

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Problem1: Write a C programing to display the following message.



The image shows a C program in a text editor and its execution in a command prompt. The program uses printf to display a message with a blue border and a pink title. The output shows the message and the execution time.

```
Start here X Untitled1.c X
1  #include<stdio.h>
2
3  main()
4  {
5
6      printf("#####");
7      printf("\n// G%enie Information et Communication //",130);
8      printf("\n#####");
9  }
10
```

C:\Users\Admin\OneDrive\Untitled1.exe

```
#####
// Génie Information et Communication //
#####
Process returned 0 (0x0)   execution time : 0.027 s
Press any key to continue.
```

Problem2: Write a C programing to get a number from a user.

```
1  #include<stdio.h>
2
3  main()
4  {
5      int a,b,n;
6      printf(" Input n: ");
7      scanf("%d",&n);
8
9      a = n*n;
10     b = n*n*n;
11     printf("Square of 2 is %d And Cube of 2 is %d",a,b);
12 }
13
```

C:\Users\Admin\OneDrive\Untitled1.exe

Input n: 2  
Square of 2 is 4 And Cube of 2 is 8  
Process returned 0 (0x0) execution time : 5.590 s  
Press any key to continue.

Problem3: Write a c programing that can convert the time.

```
1  #include<stdio.h>
2
3  main()
4  {
5
6      int h,m,s;
7      printf("Enter hour : ");
8      scanf("%d",&h);
9      printf("Enter minute : ");
10     scanf("%d",&m);
11     printf("Enter second : ");
12     scanf("%d",&s);
13
14     s = h*3600 + m*60 + s;
15
16     printf("The all about time is equal to %d second.",s);
17     printf("\n5h45m50s equal to %d second.",s);
18 }
19
```

C:\Users\Admin\OneDrive\Ex.exe

```
Enter hour : 5
Enter minute : 45
Enter second : 50
The all about time is equal to 20750 second.
5h45m50s equal to 20750 second.
Process returned 0 (0x0)   execution time : 8.035 s
Press any key to continue.
```

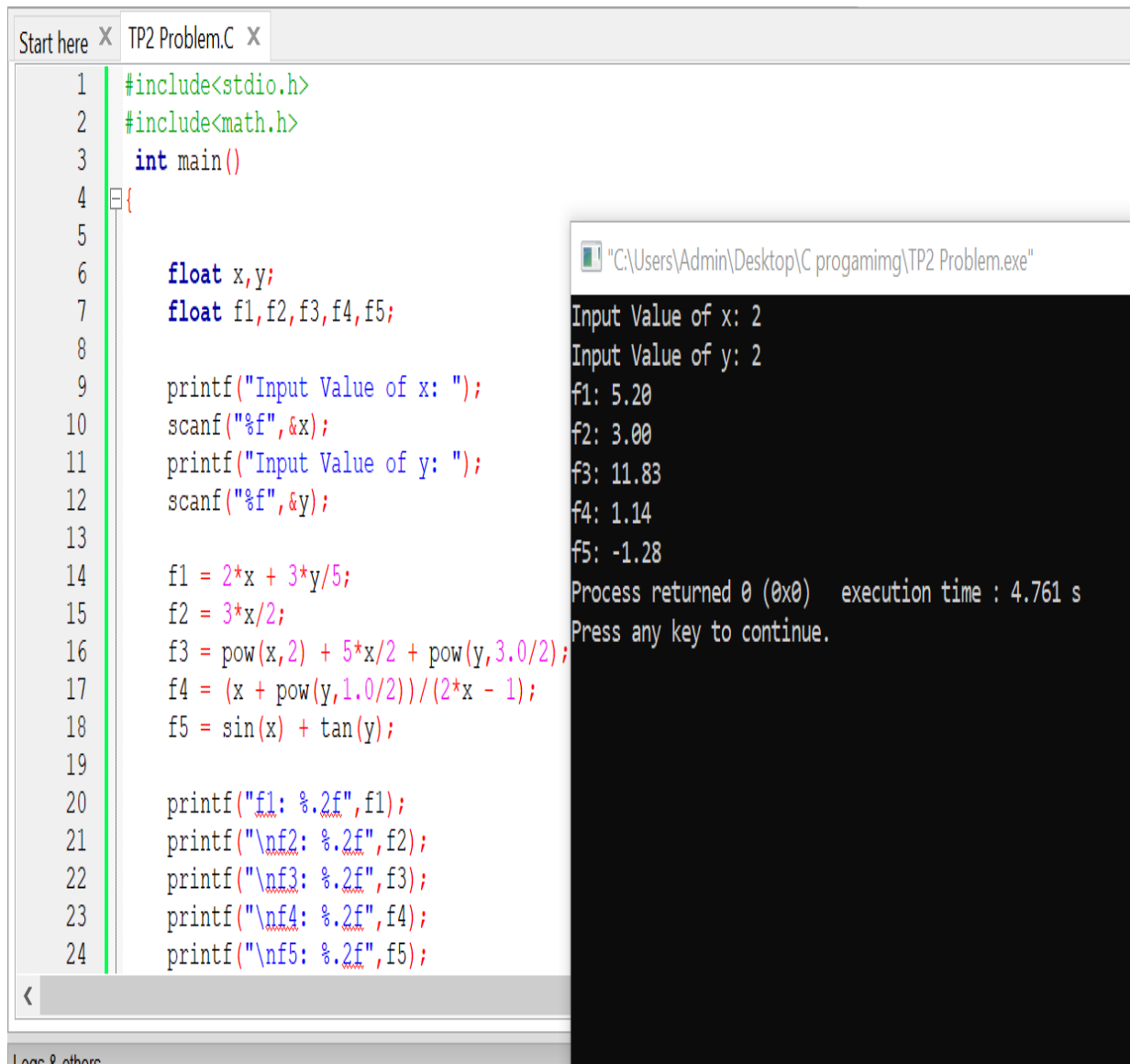
Problem4: Write a C program to convert time to second to a time format including hour, minute, and second.

```
Start here X Untitled1.c X
1  #include<stdio.h>
2
3  main()
4  {
5
6      int h,m,s;
7      printf("Input time in second: ");
8      scanf("%d",&s);
9      h = s/3600;
10     m = (s%3600)/60;
11     s = s - (h*3600 + m*60);
12
13     printf("It is: %dh %dm %ds",h,m,s);
14 }
15
```

C:\Users\Admin\OneDrive\Untitled1.exe

```
Input time in second: 3666
It is: 1h 1m 6s
Process returned 0 (0x0)   execution time : 7.369 s
Press any key to continue.
```

**Problem5:** Write a c programing that calculate some formula and display result.



The image shows a C program in a text editor and its execution in a command prompt. The program calculates five values (f1 to f5) based on user input for x and y. The output shows the calculated values with two decimal places.

```
1 #include<stdio.h>
2 #include<math.h>
3 int main()
4 {
5
6     float x,y;
7     float f1,f2,f3,f4,f5;
8
9     printf("Input Value of x: ");
10    scanf("%f",&x);
11    printf("Input Value of y: ");
12    scanf("%f",&y);
13
14    f1 = 2*x + 3*y/5;
15    f2 = 3*x/2;
16    f3 = pow(x,2) + 5*x/2 + pow(y,3.0/2);
17    f4 = (x + pow(y,1.0/2))/(2*x - 1);
18    f5 = sin(x) + tan(y);
19
20    printf("f1: %.2f",f1);
21    printf("\nf2: %.2f",f2);
22    printf("\nf3: %.2f",f3);
23    printf("\nf4: %.2f",f4);
24    printf("\nf5: %.2f",f5);
```

Execution Output:

```
"C:\Users\Admin\Desktop\C programing\TP2 Problem.exe"
Input Value of x: 2
Input Value of y: 2
f1: 5.20
f2: 3.00
f3: 11.83
f4: 1.14
f5: -1.28
Process returned 0 (0x0)   execution time : 4.761 s
Press any key to continue.
```