ព្រះរាជាណាចក្រកម្ពុជា

ជាតិ សាសនា ព្រះមហាក្សត្រ

វិទ្យាស្ថានបច្ចេកវិទ្យាកម្ពុជា

ដេប៉ាតឺម៉ង់ថ្នាក់ឆ្នាំសិក្សាមូលដ្ឋាន

Assingment-TP

Subject: Data strucure & Programming

Student name	ID	score
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Teacher: Mr.ROEUN Pachroth

Practice1: Write a C program to display the following:

****

* Institute of Technology Of Cambodian *

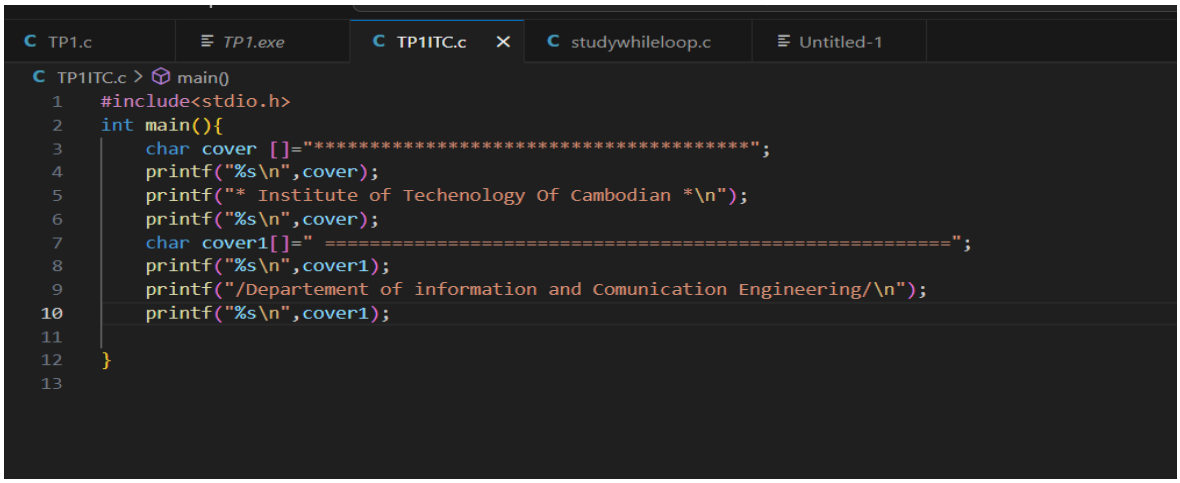
****

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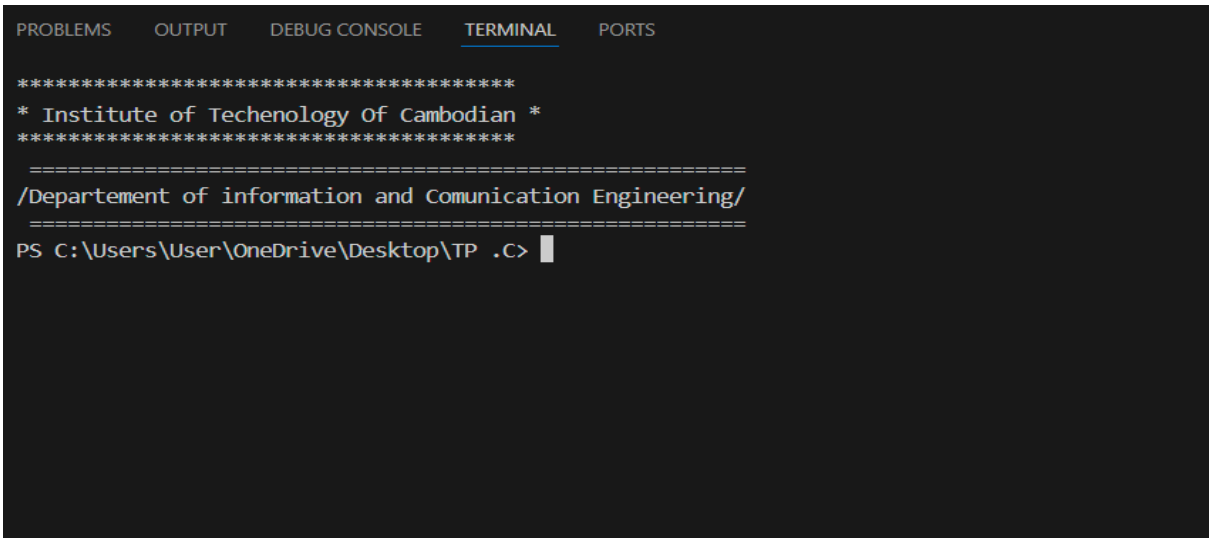
/ Department of information and Communication Engineering /

==========

=>Code:



=>Result:



Noted:

char cover[] = "********";**

- Creates a **string (array of characters)** called cover.
- The content of this string is "**********".

char cover1[] = "==========";

- Creates another string called cover1.

Practice2: Write a C program to store 3 information such as your name, your department and your year of study. Then the program displays the following message:

--

Hello everyone!

My name is yourName.

I am a year NUMBER

I am from deparmentName.

Welcome to C programming!

Hello World!

-

=>Code:

```c
#include <stdio.h>
int main() {
    char myName[] = "vichka";
    char departmentName[] = "GIC";
    int year = 2;

    printf("--\n");
    printf("Hello everyone!\n");
    printf("My name is %s.\n", myName);
    printf("I am a year %d.\n", year);
    printf("I am from %s.\n", departmentName);
    printf("\nHello World!\n--\n");

}
```

=>Result:

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS C:\Users\User\OneDrive\Desktop\TP .C>  & 'c:\Users\User\.vscod
'--stdin=Microsoft-MIEngine-In-gtqlaik2.hph' '--stdout=Microsoft-
MIEngine-Pid-rqguwah2.20w' '--dbgExe=C:\msys64\ucrt64\bin\gdb.exe
--
Hello everyone !
My name is Vichka
I am a year 5.
I am from GIC
Welcome to C programming.

Hello World!
-
PS C:\Users\User\OneDrive\Desktop\TP .C>
```

Noted:

char myName[] = "vichka"; - String variable storing name

char departmentName[] = "GIC"; - String variable storing department

int year = 2; - Integer variable storing year

Practice3: Write a C program to read your surmame and name from keyboard then show message

INPUT:

Enter your name: Sok

Enter your gender(M/F): M

Eriter your age: 20

OUTPUT:

Welcome to GIC Sok, M. 20

=>Code:

```c
#include <stdio.h>

int main() {
    char name[10];
    char gender;
    int age;
    printf("Enter your name: ");
    scanf("%s", name);
    printf("Enter your gender (M/F): ");
    scanf(" %c", &gender);
    printf("Enter your age: ");
    scanf("%d", &age);
    printf("\nWelcome to GIC %s, %c, %d\n", name, gender, age);


}

```

=>Result:

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

'--stdin=Microsoft-MIEngine-In-gzby2drp.sum' '--stdout=Microsoft-MIEngine-Out-qy5pkvea.iwo' '--
MIEngine-Pid-kan4vuxb.0m0' '--dbgExe=C:\msys64\ucrt64\bin\gdb.exe' '--interpreter=mi'
Enter your name:vichka
Enter your gender (M/F):M
Enter your age:18
Welcome to GIC vichka,M,18.
PS C:\Users\User\OneDrive\Desktop\TP .C>
```

Noted:

char name[10] - Character array to store name (max 9 characters + null terminator)

char gender - Single character to store gender ('M' or 'F')

int age - Integer to store age

- User Input Section:
- Name input: printf("Enter your name: ""); - CONTAINS ERROR (extra quotation mark)

scanf("%s", name); - Reads string input

- Gender input: printf("Enter your gender (M/F): ");

scanf("%c", &gender); - Reads single character

- Age input: printf("Enter your age: ");

scanf("%d", &age); - Reads integer

Practice4: Write a C program to compute 5 basic mathematical operations between two input numbers a and b. The 4 operations are: addition, subtraction, multiplication, division and modulo. The program looks like the following:

INPUT:

Enter a: 7

Enter b: 2

OUTPUT:

> Basic mathematics are:

Addition: 7+2=9

Subtraction: 7-2-5

Multiplication: 7*2 = 14

Division: 7/23.5, and Modulo: 7%2 = 1

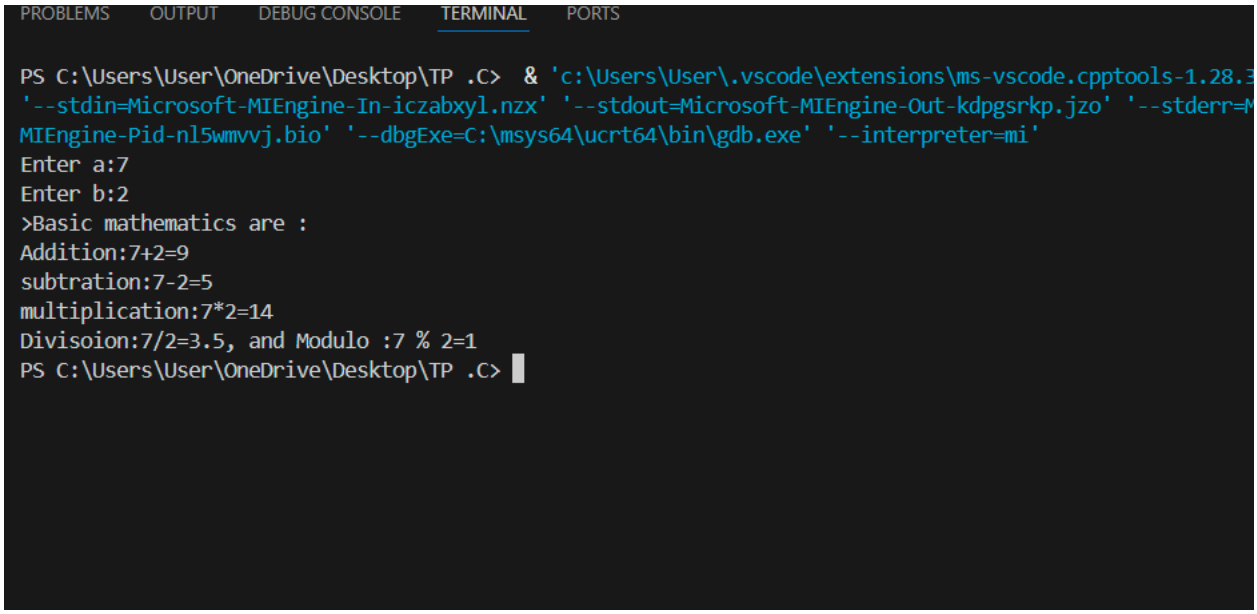
=>Code:

TP1.c | TP1ITC.c | studywhileloop.c | Untitled-1

TP1ITC.c > ...

```c
#include<stdio.h>
int main(){
    int a ,b;
    printf("Enter a:"),scanf("%d",&a);
    printf("Enter b:"),scanf("%d",&b);
    printf(">Basic mathematics are :\n");
    int addition =a+b;
    printf("Addition:%d+%d=%d\n",a,b,addition);
    int  subtration = a-b;
    printf("subtration:%d-%d=%d\n",a,b,subtration);
    int multiplication =a*b;
    printf("multiplication:%d*%d=%d\n",a,b,multiplication);
    float  division =(float)a/b;
    printf("Divisoion:%d/%d=%.1f,",a,b,division);
    int modulo = a%b;
    printf(" and Modulo :%d %% %d=%d\n",a,b,modulo);
}
```

=>Result:



Noted:

printf("Enter a:"),scanf("%d",&a); - Prompts for and reads first number

printf("Enter b:"),scanf("%d",&b); - Prompts for and reads second number

Practice5: Write a C program to calculate the surface of a rectangle from the user input of width and height of the rectangle.

INPUT:

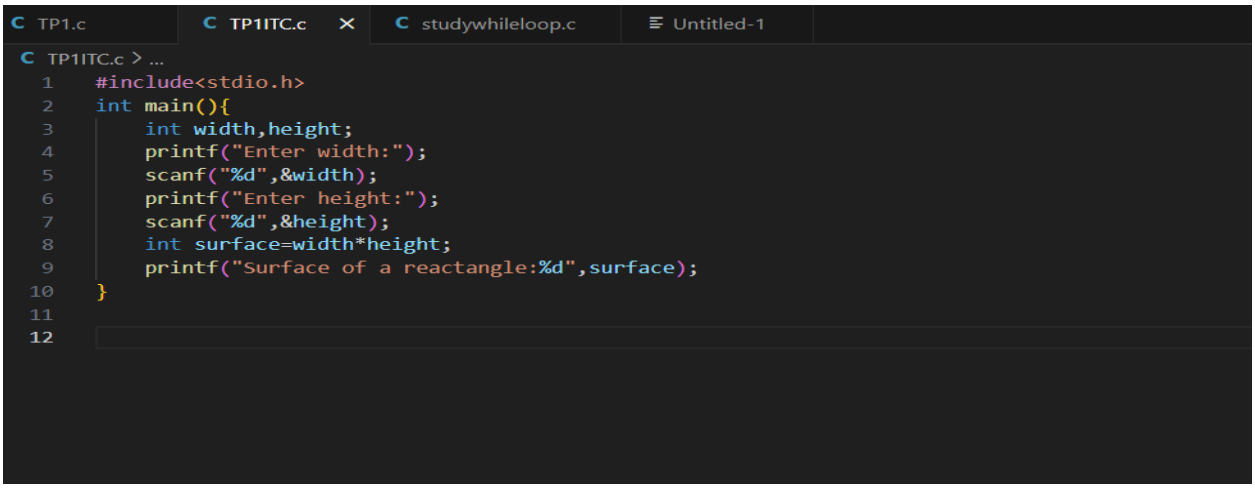
Enter width: 7

Enter height: 2

OUTPUT:

Surface of a rectangle: 14

=>Code:



=>Result:

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS C:\Users\User\OneDrive\Desktop\TP .C>  & 'c:\Users\User\.vscode\extensions\ms-vscode.cp
'--stdin=Microsoft-MIEngine-In-0ckfldun.bem' '--stdout=Microsoft-MIEngine-Out-zj5liw41.k42
MIEngine-Pid-n4tseosr.3r1' '--dbgExe=C:\msys64\ucrt64\bin\gdb.exe' '--interpreter=mi'
Enter width:7
Enter height:2
Surface of a reactangle:14
PS C:\Users\User\OneDrive\Desktop\TP .C>
```

Practice6: Write a program to get the name and year of birth from a user. Then display information: name and year and his/her age.

INPUT:

Enter your name: Sok

Enter your year of birth: 2000

OUTPUT:

Name: Sok

Year of birth: 2000

Age: 24

=>**Code:**

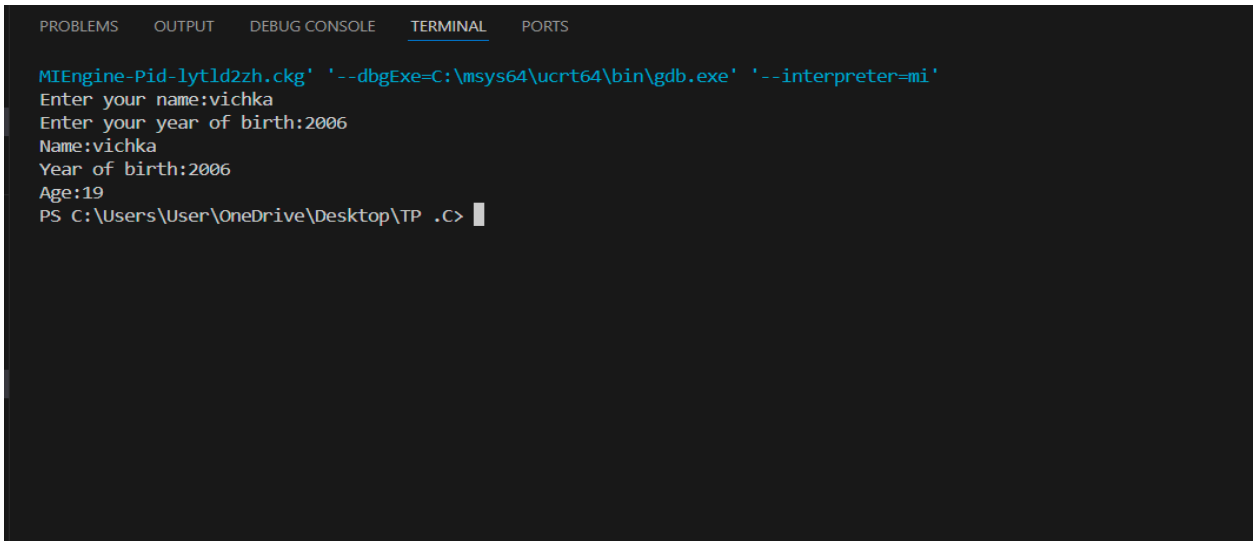
TP1.c | TP1ITC.c | studywhileloop.c | Untitled-1

TP1ITC.c > ...

```c
#include<stdio.h>
int main(){
    char name[10];
    int year,age;
    printf("Enter your name:");
    scanf("%s",&name);
    printf("Enter your year of birth:");
    scanf("%d",&year);
    age = 2025-year;
    printf("Name:%s\n",name);
    printf("Year of birth:%d\n",year);
    printf("Age:%d\n",age);

}
```

=>Result:


PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
MIEngine-Pid-lytld2zh.ckg' '--dbgExe=C:\msys64\ucrt64\bin\gdb.exe' '--interpreter=mi'
Enter your name:vichka
Enter your year of birth:2006
Name:vichka
Year of birth:2006
Age:19
PS C:\Users\User\OneDrive\Desktop\TP .C>