Assignments 1

EX 1

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Quick Access

Project Explorer

- Lecture 3_ Lab 1
- Lecture 3_Assignment 1_EX 1 [Mastering-Embedded-System-O
  - Binaries
  - Includes
  - Debug
  - Lecture 3_Assignment 1_EX 1.c

*Lecture 3_Assignment 1_EX 1.c

```c
/*
 * Lecture 3_Assignment 1_EX 1.c
 *
 *  Created on: 27 Jul 2022
 *      Author: Muhammad Osama
 */

//EX1:
//
//Write C Program to Print a Sentence
//
//i should see the Console as following:
//##########Console-output###
//C Programming

#include<stdio.h>
int main(void){
    printf("C Programming");
}

```

Outline

Build Targets

Task List

- stdio.h
- main(void) : int

Problems Tasks Console Properties

<terminated> (exit value: 0) Lecture 3_Assignment 1_EX 1.exe [C/C++ Application] M:\Eng\Embedded Systems Diploma\Lessones Assessments\Mastering-Embedded-System-Online-Diploma\C-Lessones Assignments

```
C Programming
```

/Lecture 3_Assignment 1_EX 1/Lecture 3_Assignment 1_EX 1.c

EX 2

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Quick Access

Project Explorer

- Lecture 3_ Lab 1
- Lecture 3_Assignment 1_EX 1
- > Lecture 3_Assignment 1_EX 2 [Mastering-Embedded-System-O
  - Binaries
  - Includes
  - Debug
  - Lecture 3_Assignment 1_EX 2.c

Lecture 3_Assignment 1_EX 2.c

```c
/*
 * Lecture 3_Assignment 1_EX 2.c
 *
 *  Created on: 27 Jul 2022
 *      Author: Muhammad Osama
 */


//EX2:
//
//Write C Program to Print a Integer Entered by a User
//i should see the Console as following:
//##########Console-output###
//Enter a integer: 25
//You entered: 25

#include<stdio.h>
int main(void){
    int x;
    printf("Enter a integer: ");
    fflush(stdin); fflush(stdout);
    scanf("%d",&x);
    printf("You entered: %d",x);
    fflush(stdin); fflush(stdout);
}
```

Outline | Build Targets | Task List

- stdio.h
- main(void) : int

Problems | Tasks | Console | Properties

<terminated> (exit value: 0) Lecture 3_Assignment 1_EX 2.exe [C/C++ Application] M:\Eng\Embedded Systems Diploma\Lessones Assessments\Mastering-Embedded-System-Online-Diploma\C-Lessones Assignments

```
Enter a integer: 25
You entered: 25
```

EX 3

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Quick Access

Project Explorer

- Lecture 3_ Lab 1
- Lecture 3_Assignment 1_EX 1
- Lecture 3_Assignment 1_EX 2
- > Lecture 3_Assignment 1_EX 3 [Mastering-Embedded-System-O
  - Binaries
  - Includes
  - Debug
  - > Lecture 3_Assignment 1_EX 3.c

Lecture 3_Assignment 1_EX 3.c

```c
/* Lecture 3_Assignment 1_EX 3.c

/*
 EX 3
 Write C Program to Add Two Integers

i should see the Console as following:
##########Console-output###
Enter two integers: 12
11
Sum: 23
*/

#include "stdio.h"

int main(void){
    int x,y;
    printf("Enter two integers: ");
    fflush(stdin); fflush(stdout);
    scanf("%d\n%d",&x, &y);
    printf("Sum: %d",x+y);
    fflush(stdin); fflush(stdout);
    return 0;
}
```

Outline

- stdio.h
- main(void) : int

Problems Tasks Console Properties Debugger Console

<terminated> (exit value: 0) Lecture 3_Assignment 1_EX 3.exe [C/C++ Application] M:\Eng\Embedded Systems Diploma\Lessones Assessments\Mastering-Embedded-System-Online-Diploma\C-Lessones Assignments

```
Enter two integers: 12
11
Sum: 23
```

/Lecture 3_Assignment 1_EX 3/Lecture 3_Assignment 1_EX 3.c

EX 4

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Quick Access

Project Explorer

- Lecture 3_ Lab 1
- Lecture 3_Assignment 1_EX 1
- Lecture 3_Assignment 1_EX 2
- Lecture 3_Assignment 1_EX 3
- Lecture 3_Assignment 1_EX 4 [Mastering-Embedded-System-O
  - Binaries
  - Includes
  - Debug
  - Lecture 3_Assignment 1_EX 4.c

Lecture 3_Assignment 1_EX 4.c

```
2  * Lecture 3_Assignment 1_EX 4.c
7
8
9  /*
10  * EX4:
11
12 Write C Program to Multiply two Floating Point Numbers
13 i should see the Console as following:
14 ##########Console-output###
15
16 Enter two numbers: 2.4
17 1.1
18 Product: 2.640000
19  */
20
21 #include<stdio.h>
22  int main(void){
23      float x,y;
24      printf("Enter two numbers: ");
25      fflush(stdin); fflush(stdout);
26      scanf("%f\n%f",&x,&y);
27      printf("Product: %f", x*y);
28      fflush(stdin); fflush(stdout);
29  }
30
```

Outline

- stdio.h
- main(void) : int

Build Targets Task List

Problems Tasks Console Properties Debugger Console

<terminated> (exit value: 0) Lecture 3_Assignment 1_EX 4.exe [C/C++ Application] M:\Eng\Embedded Systems Diploma\Lessones Assessments\Mastering-Embedded-System-Online-Diploma\C-Lessones Assignments

```
Enter two numbers: 2.4
1.1
Product: 2.640000
```

/Lecture 3_Assignment 1_EX 4/Lecture 3_Assignment 1_EX 4.c

EX 5

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Quick Access

Project Explorer

- Lecture 3_ Lab 1
- Lecture 3_Assignment 1_EX 1
- Lecture 3_Assignment 1_EX 2
- Lecture 3_Assignment 1_EX 3
- Lecture 3_Assignment 1_EX 4
- Lecture 3_Assignment 1_EX 5 [Mastering-Embedded-System-O
  - Binaries
  - Includes
  - Debug
  - Lecture 3_Assignment 1_EX 5.c

Lecture 3_Assignment 1_EX 5.c

```c
/*
 * Lecture 3_Assignment 1_EX 5.c
 *
 *  Created on: 27 Jul 2022
 *      Author: Muhammad Osama
 */

/*
 * EX5:

Write C Program to Find ASCII Value of a Character

########Console_output######
Enter a character: G
ASCII value of G = 71
 */

#include <stdio.h>

int main(void){
    char x;
    printf("Enter a character: ");
    fflush(stdin); fflush(stdout);
    scanf("%c",&x);
    printf("ASCII value of %c = %d",x,x);
}
```

Outline

- stdio.h
- main(void) : int

Problems Tasks Console Properties Debugger Console

<terminated> (exit value: 0) Lecture 3_Assignment 1_EX 5.exe [C/C++ Application] M:\Eng\Embedded Systems Diploma\Lessones Assessments\Mastering-Embedded-System-Online-Diploma\C-Lessones Assignments

```
Enter a character: G
ASCII value of G = 71
```

EX 6

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Quick Access

Project Explorer

- Lecture 3_ Lab 1
- Lecture 3_Assignment 1_EX 1
- Lecture 3_Assignment 1_EX 2
- Lecture 3_Assignment 1_EX 3
- Lecture 3_Assignment 1_EX 4
- Lecture 3_Assignment 1_EX 5
- > Lecture 3_Assignment 1_EX 6 [Mastering-Embedded-System-O
  - Binaries
  - Includes
  - Debug
  - Lecture 3_Assignment 1_EX 6.c

Lecture 3_Assignment 1_EX 6.c

```c
/* Lecture 3_Assignment 1_EX 6.c

/*
 *EX6:

Write Source Code to Swap Two Numbers

########Console_output######
Enter value of a: 1.20
Enter value of b: 2.45

After swapping, value of a = 2.45
After swapping, value of b = 1.2

 */

#include<stdio.h>
int main(void){
    float a,b;
    printf("Enter value of a: ");
    fflush(stdin); fflush(stdout);
    scanf("%f",&b);
    printf("Enter value of b: ");
    fflush(stdin); fflush(stdout);
    scanf("%f",&a);
    printf("After swapping, value of a = %.2f\nAfter swapping, value of b = %.1f",a,b);
    fflush(stdin); fflush(stdout);
}
```

Outline | Build Targets | Task List

- stdio.h
- main(void) : int

Problems | Tasks | Console | Properties | Debugger Console

<terminated> (exit value: 0) Lecture 3_Assignment 1_EX 6.exe [C/C++ Application] M:\Eng\Embedded Systems Diploma\Lessones Assessments\Mastering-Embedded-System-Online-Diploma\C-Lessones Assignments

```
Enter value of a: 1.20
Enter value of b: 2.45
After swapping, value of a = 2.45
After swapping, value of b = 1.2
```

Ex 7

File Edit Source Refactor Navigate Search Project Run Window Help

Quick Access

Project Explorer

- Lecture 3_ Lab 1
- Lecture 3_Assignment 1_EX 1
- Lecture 3_Assignment 1_EX 2
- Lecture 3_Assignment 1_EX 3
- Lecture 3_Assignment 1_EX 4
- Lecture 3_Assignment 1_EX 5
- Lecture 3_Assignment 1_EX 6
- > Lecture 3_Assignment 1_EX 7 [Masterir
  - Binaries
  - Includes
  - Debug
  - > Lecture 3_Assignment 1_EX 7.c
- Lecture 3_Assignment 2_EX 1
- Lecture 3_Assignment 2_EX 2
- Lecture 3_Assignment 2_EX 3
- Lecture 3_Assignment 2_EX 4
- Lecture 3_Assignment 2_EX 5
- Lecture 3_Assignment 2_EX 6
- Lecture 3_Assignment 2_EX 7
- Lecture 3_Assignment 2_EX 8

Lecture 3_Assignment 1_EX 7.c

```c
 * Lecture 3_Assignment 1_EX 7.c

/*
 * EX7:
it is an interview trick

Write Source Code to Swap Two Numbers without temp variable.
 */

#include<stdio.h>

int main(void){
    float x,y;

    printf("Enter value of a: ");
    fflush(stdin); fflush(stdout);
    scanf("%f",&x);

    printf("\nEnter value of b: ");
    fflush(stdin); fflush(stdout);
    scanf("%f",&y);

    x = x+y;
    y = x-y;
    x = x-y;

    printf("\nAfter swapping, value of a = %.0f\n and value of b = %.0f",x,y);
    fflush(stdin); fflush(stdout);
}
```

Outline

- stdio.h
- main(void) : int

Problems Tasks Console Properties Debugger Console

<terminated> (exit value: 0) Lecture 3_Assignment 1_EX 7.exe [C/C++ Application] M:\Eng\Embedded Systems Diploma\Lessones Assessments\Mastering-Embedded-System-Online-Diploma\C-Lessones Assignments\Unit 2\Lecture 3_Assign

```
Enter value of a: 4

Enter value of b: 5

After swapping, value of a = 5
 and value of b = 4
```

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