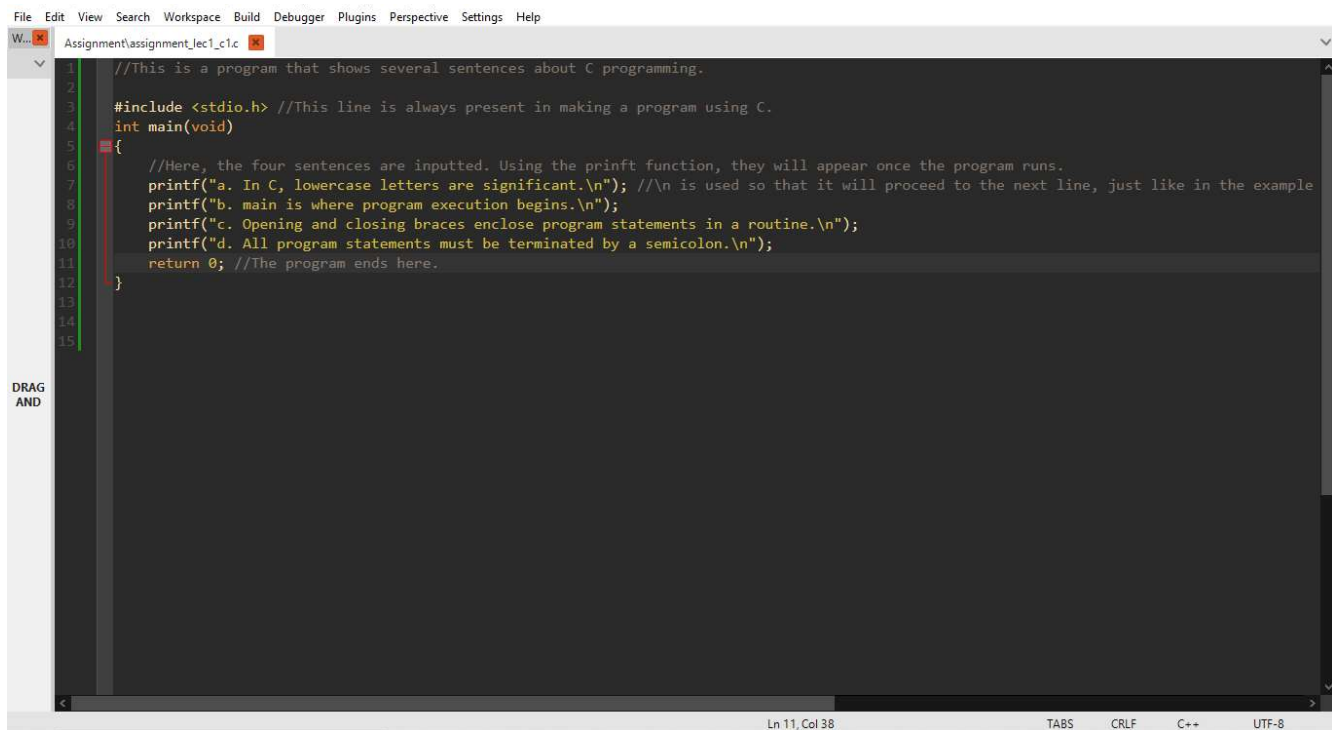


Basic Syntax in C  
Lecture 1 Assignments  
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Section 1

1. Write a program that prints the following text at the terminal.
  - a. In C, lowercase letters are significant.
  - b. main is where program execution begins.
  - c. Opening and closing braces enclose program statements in a routine.
  - d. All program statements must be terminated by a semicolon.

Save your code as assignment\_lec1\_c1.c



```
File Edit View Search Workspace Build Debugger Plugins Perspective Settings Help
Assignment\assignment_lec1_c1.c
1 //This is a program that shows several sentences about C programming.
2
3 #include <stdio.h> //This line is always present in making a program using C.
4 int main(void)
5 {
6     //Here, the four sentences are inputted. Using the printf function, they will appear once the program runs.
7     printf("a. In C, lowercase letters are significant.\n"); //\n is used so that it will proceed to the next line, just like in the example
8     printf("b. main is where program execution begins.\n");
9     printf("c. Opening and closing braces enclose program statements in a routine.\n");
10    printf("d. All program statements must be terminated by a semicolon.\n");
11    return 0; //The program ends here.
12 }
13
14
15
DRAG AND
Ln 11, Col 38 TABS CRLF C++ UTF-8
```

2. What output would you expect from the following program?

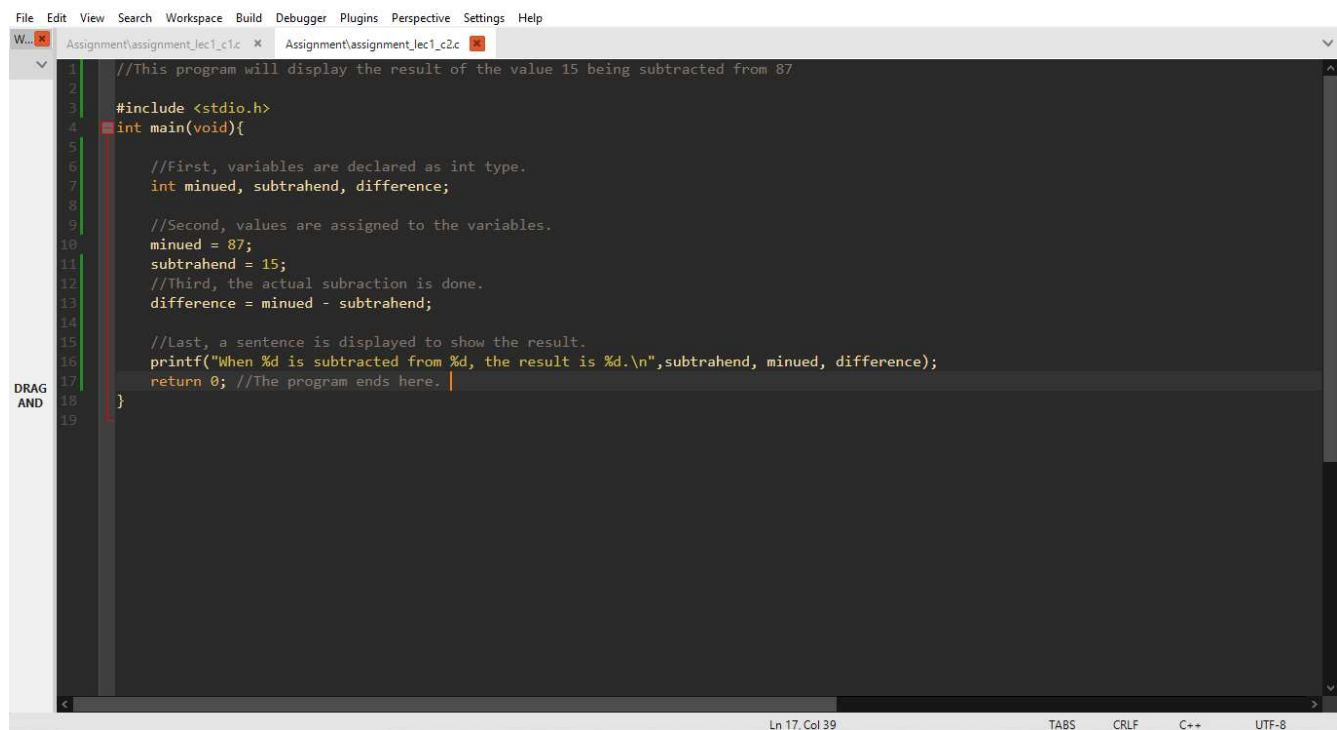
```
#include <stdio.h>
    int main (void){
        printf ("Testing...");
        printf ("....1");
        printf ("...2");
        printf ("..3");
        printf ("\n");
        return 0;
    }
```

ANSWER:

The output should be Testing.....1...2...3 and there's a blank line before it ends. Despite being written using multiple printf function, it will still appear in one line only because there is no command that allows it to display in different lines. If there was `\n` used in between them, it will appear differently.

3. Write a program that subtracts the value 15 from 87 and displays the result, together with an appropriate message, at the terminal.

Save your code as `assignment_lec1_c2.c`.

A screenshot of a code editor window with a dark theme. The menu bar at the top includes File, Edit, View, Search, Workspace, Build, Debugger, Plugins, Perspective, Settings, and Help. Two tabs are open: 'Assignment\assignment\_lec1\_c1.c' and 'Assignment\assignment\_lec1\_c2.c'. The active tab shows a C program. The code is as follows:

```
1 //This program will display the result of the value 15 being subtracted from 87
2
3 #include <stdio.h>
4 int main(void){
5
6     //First, variables are declared as int type.
7     int minued, subtrahend, difference;
8
9     //Second, values are assigned to the variables.
10    minued = 87;
11    subtrahend = 15;
12    //Third, the actual subtraction is done.
13    difference = minued - subtrahend;
14
15    //Last, a sentence is displayed to show the result.
16    printf("When %d is subtracted from %d, the result is %d.\n",subtrahend, minued, difference);
17    return 0; //The program ends here.
18 }
19
```

The status bar at the bottom indicates 'Ln 17, Col 39', 'TABS', 'CRLF', 'C++', and 'UTF-8'. On the left side of the editor, there is a vertical toolbar with icons for file operations and a label 'DRAG AND'.

4. Identify the syntactic errors in the following program. Then type in and run the corrected program to ensure you have correctly identified all the mistakes.

```
#include <stdio.h>
int main(Void)
    INT sum;
    /* COMPUTE RESULT
    sum = 25 + 37 - 19
    /* DISPLAY RESULTS //
    printf ("The answer is %i\n" sum);
    return 0;
}
```

Save your code as assignment\_lec4\_c4.c

Syntactic errors in the program:

1. Void is not written in lowercase and no opening brace in the program.
2. INT is an unrecognizable keyword.
3. Comments are not used properly.
4. Variable is named sum but has subtraction. It is not really an error but quite confusing.
5. The sum variable is not properly called in the printf line.

```
1  /*
2  #include <stdio.h>
3  int main(Void)
4  INT sum;
5  /* COMPUTE RESULT
6  sum = 25 + 37 - 19
7  /* DISPLAY RESULTS //
8  printf ("The answer is %i\n" sum);
9  return 0;
10 }
11 */
12
13 //This program is the fixed one.
14 #include <stdio.h>
15
16 int main(void)
17 { //There's no opening brace in the previous program.
18
19     int sum; //INT is an unrecognizable keyword because int is fixed keyword and also, c is case sensitive language.
20     /* COMPUTE RESULT */
21     /*The previous program used a multi-line comment format but there is no closing mark.
22     Looking at it, the rest of the program will appear as a comment. There should be a closing
23     mark or should have used the mark or command for single line comment.*/
24
25     sum = 25+37-19; //This will appear as an error because there's no semicolon in the previous one.
26                     //Also, the variable is named sum yet there's subtraction.
27                     //While it is fine to use any variable name, it is better to organized and be precise.
28
29     //DISPLAY RESULTS
30     //The comment used both single line and multi-line way of displaying comments.
31     printf("The answer is %i \n", sum); //Because there was no comma, there was an error and the sum variable was not called.
32     return 0;
33 }
34
35
```

5. What output might you expect from the following program?

```
#include <stdio.h>

int main (void){
int answer, result;
answer = 100.
result = answer - 10;
printf ("The result is %i\n", result + 5);
return 0;
```

There is no output because this program will have a build error, so, it will not run. It is because in line number 4, there is no ; (semicolon) which indicates as the end of a statement. Instead of semicolon, there is a point. Also, there is no closing brace at the end of the program.