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202101275

CMSC 21- 1

Basic Syntax in C - Lecture 1 Assignment

1.

```
C assignment_lec1_c1.c > main(void)
1  #include <stdio.h>
2
3  int main (void)
4  {
5      printf("a. In C, lowercase letters are significant.\n");
6      printf("b. main is where program execution begins.\n");
7      printf("c. Opening and closing braces enclose program statements in a routine.\n");
8      printf("d. All program statements must be terminated by a semicolon.\n");
9
10     return 0;
11 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Windows PowerShell
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PS C:\Users\Acer\Documents\CMSC21\Lecture1\Assignments> cd "c:\Users\Acer\Documents\CMSC21\Lecture1\Assignments\" ; if (\$?) { gcc assignment_lec1_c1.c -o assignment_1ec1_c1 } ; if (\$?) { .\assignment_lec1_c1 }

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.

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2. The expected output would be:

Testing.....1...2..3

3.

```
C assignment_lec1_c2.c > main(void)
1  #include <stdio.h>
2
3  int main(void)
4  {
5      //variable declaration and initialization
6      int num1, num2, diff;
7      num1 = 87;
8      num2 = 15;
9
10     //formula of subtraction
11     diff = num1 - num2;
12
13     //display of result
14     printf("Difference between %d and %d is = %d",num1, num2, diff);
15
16     return 0;
17 }
```

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PS C:\Users\Acer\Documents\CMSC21\Lecture1\Assignments> cd "c:\Users\Acer\Documents\CMSC21\Lecture1\Assignments\" ; if (\$?) { gcc assignment_lec1_c2.c -o assignment_1ec1_c2 } ; if (\$?) { .\assignment_lec1_c2 }

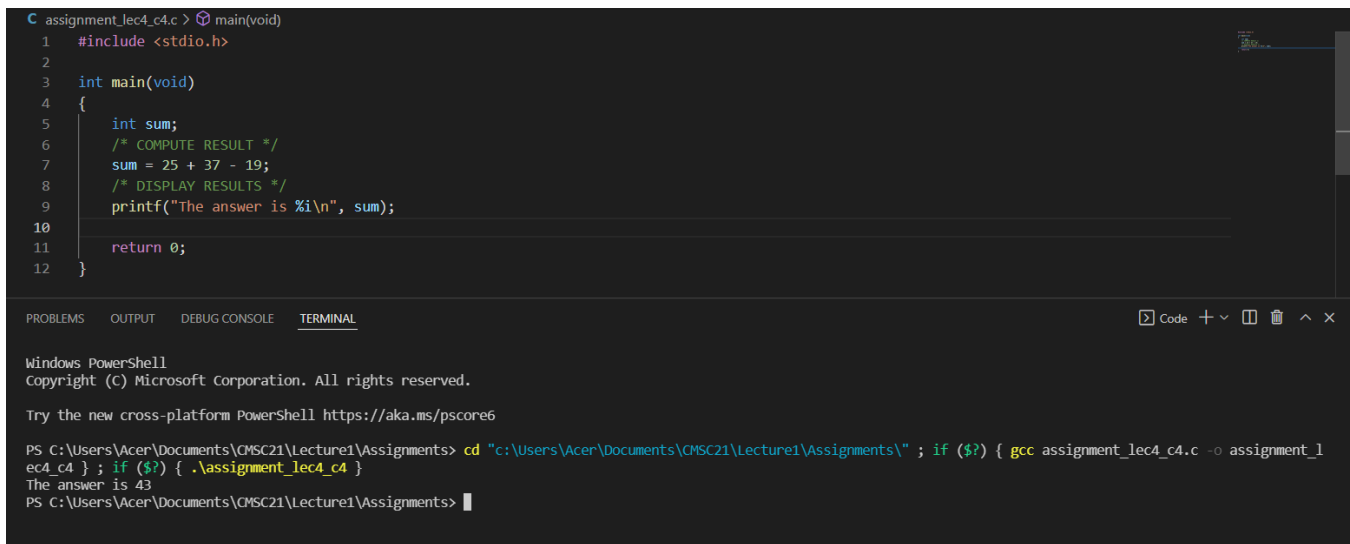
Difference between 87 and 15 is = 72

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4. Syntactic errors in the program:

- a. **int main(Void)** - Missing curly brace {}, (Void) should be (void)
- b. **INT sum;** – “INT” must be in lowercase
- c. **/* COMPUTE RESULT** – Comment should also end with asterisk and forward slash (*/).
- d. **sum = 25 + 37 – 19** – Missing semicolon (;)
- e. **/* DISPLAY RESULTS //** - Comment that starts with a slash asterisk /* must also end with an asterisk slash */
- f. **printf("The answer is %i\n" sum);** - Missing comma (,) after the character " and before the word sum

Corrected program:



```
C assignment_lec4_c4.c > main(void)
1  #include <stdio.h>
2
3  int main(void)
4  {
5      int sum;
6      /* COMPUTE RESULT */
7      sum = 25 + 37 - 19;
8      /* DISPLAY RESULTS */
9      printf("The answer is %i\n", sum);
10
11     return 0;
12 }
```

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PS C:\Users\Acer\Documents\CMSC21\Lecture1\Assignments> cd "c:\Users\Acer\Documents\CMSC21\Lecture1\Assignments\"; if (\$?) { gcc assignment_lec4_c4.c -o assignment_1ec4_c4 }; if (\$?) { .\assignment_lec4_c4 }

The answer is 43

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5. The program would result in an error since “answer = 100.” should have ended with a semi-colon (;) rather than a period.