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CMSC 21 Assignment 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.

```c
#include <stdio.h>

int main(void){
    //uses line breaks "\n" to separate lines when printing.
    printf("In C, lowercase letters are significant.\n");
    printf("main is where program execution begins.\n");
    printf("Opening and closing braces enclose program statements in a routine.\n");
    printf("All program statements must be terminated by a semicolon.\n");
}
```

```
In C, lowercase letters are significant.
main is where program execution begins.
Opening and closing braces enclose program statements in a routine.
All program statements must be terminated by a semicolon.
```

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

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

Output: Testing.....1...2..3

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

```c
#include <stdio.h>

int main(void){
    int val1,val2,result;   //declares variables as integers

    val1 = 87;              //stores the first value
    val2 = 15;              //stores the second value

    result = val1 - val2;   //substracts 15 from 87 and stores the result

    printf("%d subtracted from %d is equal to %d.", val2,val1,result);  //prints the result message
    return 0;
}
```

```
15 subtracted from 87 is equal to 72.
```

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)                          Void should be lowercased, missing bracket
        INT sum;                        INT should be lowercased
        /* COMPUTE RESULT               /* should be //
        sum = 25 + 37 – 19              missing semicolon
        /* DISPLAY RESULTS //           // should be */ to match comment syntax
        printf ("The answer is %i\n" sum);  missing comma after string
        return 0;
}
```

```c
#include <stdio.h>

int main(void){                         //fixed Void to void and added open bracket
    int sum;                            //changed INT to int
    // COMPUTE RESULT                   //changed /* to //
    sum = 25 + 37 - 19;                 //added semicolon at the end of the line
    /* DISPLAY RESULTS */               //changed // to */ to fix comment syntax
    printf ("The answer is %i\n", sum); //added comma after string before var(sum)
    return 0;
}
```

```
The answer is 43
```

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;
        }
```

Output: error: expected ';' before 'result'
result = answer - 10;