

Basic Syntax in C

Lecture 1 Assignments

1. Write a program that prints the following text at the terminal.

a. In C, lowercase letters are significant.

```
1  #include <stdio.h>
2
3  int main(void) {
4
5      printf("In C, lowercase letters are significant.\n");
6
7      return 0;
8  }
```

b. main is where program execution begins.

```
1  #include <stdio.h>
2
3  int main(void) {
4
5      printf("main is where program execution begins.\n");
6
7      return 0;
8  }
```

c. Opening and closing braces enclose program statements in a routine.

```
1  #include <stdio.h>
2
3  int main(void) {
4
5      printf("Opening and closing braces enclose program statements in a routine.\n");
6
7      return 0;
8  }
```

d. All program statements must be terminated by a semicolon.

```

1  #include <stdio.h>
2
3  int main(void) {
4
5      printf("All program statements must be terminated by a semicolon.\n");
6
7      return 0;
8  }
9

```

```

"C:\Users\Trixie Anne\Downloads\1\assignment_lec1_c1.c.exe"
All program statements must be terminated by a semicolon.

Process returned 0 (0x0)   execution time : 5.989 s
Press any key to continue.

```

```

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

```

```

"C:\Users\Trixie Anne\Downloads\1\assignment_lec1_c1.c.exe"
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.

Process returned 0 (0x0)   execution time : 5.494 s
Press any key to continue.

```

2. What output would you expect from the following program?
 - a printed statement or text saying "Testing.....1...2..3" with a new line in the end.

```

"C:\Users\Trixie Anne\Downloads\1\bin\Debug\1.exe"
Testing.....1...2..3

Process returned 0 (0x0)   execution time : 8.006 s
Press any key to continue.

```

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

```

1  #include <stdio.h>
2
3  int main(void) {
4
5      int difference, value1, value2;
6
7      value1 = 15;
8      value2 = 87;
9      difference = value2 - value1;
10
11     printf("The difference when 15 is subtracted from 87 is %d.\n", difference);
12
13     return 0;
14 }
15

```

```
"C:\Users\Trixie Anne\Downloads\2\bin\Debug\2.exe"
The difference when 15 is subtracted from 87 is 72.
Process returned 0 (0x0)   execution time : 6.528 s
Press any key to continue.
```

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)      - uppercase Void, should be lowercase
INT sum;            - all uppercase INT, should be lowercase
/* COMPUTE RESULT
sum = 25 + 37 - 19
/* DISPLAY RESULTS //
printf ("The answer is %i\n" sum); - comma between \n" and sum
return 0;
}
```

Corrected code:

```
1  #include <stdio.h>
2
3  int main(void) {
4
5      int sum;
6
7      sum = 25 + 37 - 19;
8
9      printf ("The answer is %i\n", sum);
10     return 0;
11
12 }
13
```

```
"C:\Users\Trixie Anne\Downloads\4\bin\Debug\4.exe"
The answer is 43
Process returned 0 (0x0)   execution time : 0.167 s
Press any key to continue.
```

5. What output might you expect from the following program?
- It will result in an error, because instead of a period, it should be a semi-colon. When run, it will raise a statement "error: expected ';' before 'result'" and will not run.

```
1  #include <stdio.h>
2  int main (void){
3      int answer, result;
4      answer = 100.
5      result = answer - 10;
6      printf ("The result is %i\n", result + 5);
7      return 0;
8  }
9
```

File	Line	Message
=== Build file: "no target" in "no project" (compiler: unknown) ===		
In function 'main':		
D:\Users\Trixie...	5	error: expected ';' before 'result'
=== Build failed: 1 error(s), 0 warning(s) (0 minute(s), 22 second(s)) ===		