

LAB 4 REPORT

Q1

CLanguage > ENGR214 > L4 > C L4_Q1.c > main()

```
1  /*//////////////////////////////////////////
2  // Title:      L4_Q1.c
3  // Author:     Ryan L.
4  // Description: C program that outputs a right triangle of asterisks given the height as input.
5  *//////////////////////////////////////////
6  #include <stdio.h>
7
8  int main(){
9      // Declare variables (test case: 3 ) // * * *
10     int height;                          // * *
11     // Initialize variables                // *
12     printf("Enter the height of the triangle: ");
13     scanf("%d", &height);
14
15     //Work
16     // iterates from 1 through the height
17     for (int i = 1; i <= height; i++) {
18         // iterates from the height through i
19         for(int j = height; j >= i; j--) {
20             //prints the asterisk the number of times equal to i - height
21             printf("* ");
22         }
23         printf("\n");
24     }
25     return 0;
26 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Users\ryanc\Documents\Code\LangLearnt\MyLanguagesLearnt\CLanguage\ENGR214\L4> cd "c:\Users\ryanc\Documents\Code\LangLearnt\MyLanguagesLearnt\CLanguage\ENGR214\L4" ; if ($?) { gcc L4_Q1.c -o L4_Q1 } ; if ($?) { .\L4_Q1 }
```

Enter the height of the triangle: 3

* * *

* *

*

Q2

CLanguage > ENGR214 > L4 > C L4_Q2.c > ...

```
1  /*//////////////////////////////////////////
2  //  Title:      L4_Q2.c
3  //  Author:     Ryan L.
4  //  Description: prints the sum of the series 9 + 99 + 999 + 9999 + 9[n] where n is a number input by the user.
5  /*//////////////////////////////////////////
6  #include <stdio.h>
7
8  int main(){
9      // Declare variables (test case: 5 (111105))
10     int n, repeatNum = 9, num = repeatNum;
11     long sum = 0;
12
13     // Initialize variables
14     printf("Enter the number of terms: ");
15     scanf("%d", &n);
16
17     //Work
18     // itterates from 1 through n
19     for (int i = 1; i <= n; i++) {
20         // prints the number and a plus sign
21         printf("%ld ", num);
22         if (i < n) {
23             printf("+ ");
24         }
25         // adds the number to the sum and multiplies the number by 10 and adds the repeat number
26         sum += num;
27         num = (num * 10) + repeatNum;
28     }
29     printf("\nThe sum of the series = %ld\n", sum);
30
31     return 0;
32 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Users\ryanc\Documents\Code\LangLearnt\MyLanguagesLearnt\CLanguage\ENGR214\L4> cd "c:\Users\ryanc\Documents\Code\LangLearnt\L4\" ; if (\$?) { gcc L4_Q2.c -o L4_Q2 } ; if (\$?) { .\L4_Q2 }

Enter the number of terms: 5

9 + 99 + 999 + 9999 + 99999

The sum of the series = 111105

Q3

```
CLanguage > ENGR214 > L4 > C L4_Q3.c > main()
4 // Description: C program that utilizes an enum to define the days of the week and prints out a message
5 based on the day entered by the user.
6 *////////////////////////////////////
7 #include <stdio.h>
8 enum Days {Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday};
9
10 int main(){
11     // Declare variables (test case: )
12     enum Days day;
13     // Initialize variables
14     printf("Enter the day number (0 for Monday, 1 for Tuesday, ..., 6 for Sunday): ");
15     scanf("%d", &day);
16     //Work
17     // switch statement to print a message based on the day
18     switch (day) {
19         case Monday :
20             printf("It's a weekday, time to work.");
21             break;
22         case Tuesday :
23             printf("It's a weekday, time to work.");
24             break;
25         case Wednesday :
26             printf("It's a weekday, time to work.");
27             break;
28         case Thursday :
29             printf("It's a weekday, time to work.");
30             break;
31         case Friday :
32             printf("Its almost weekend, Lets wrap up things fast.");
33             break;
34         case Saturday :
35             printf("It's Weekend, time to relax.");
36             break;
37         case Sunday :
38             printf("It's Weekend, time to relax.");
39             break;
40         default :
41             printf("Invalid day entered");
42             break;
43     }
44     return 0;
45 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
} ; if ($?) { .\L4_Q3 }
Enter the day number (0 for Monday, 1 for Tuesday, ..., 6 for Sunday): 3
It's a weekday, time to work.
PS C:\Users\ryanc\Documents\Code\LangLearnt\MyLanguagesLearnt\CLanguage\ENGR214\L4> cd "c:\Users\ryanc\Documents\Code\LangLearnt\MyLar
} ; if ($?) { .\L4_Q3 }
Enter the day number (0 for Monday, 1 for Tuesday, ..., 6 for Sunday): 4
Its almost weekend, Lets wrap up things fast.
PS C:\Users\ryanc\Documents\Code\LangLearnt\MyLanguagesLearnt\CLanguage\ENGR214\L4>
```