

LAB 3 REPORT

Q1

```

1  /*//////////////////////////////////////////////////////////////////
2  //   Title:      L3_Q1.c
3  //   Author:     Ryan L.
4  //   Description: returns the numbers between low and high that are divisible by
                    x
5  *//////////////////////////////////////////////////////////////////
6  #include <stdio.h>
7
8  int main(){
9      // Declare variables (test case: 1 10 2 (2 4 6 8))
10     int low, high, x;
11
12     // Initialize variables
13     //get input low, high, iterater
14     printf(": ");
15     scanf("%d %d %d", &low, &high, &x);
16
17     //Work
18     //iterate through low to high
19     for (int i = low; i < high; i++){
20
21         //if i is a multiple of x, print i
22         if (i % x == 0){
23             printf("%d, ", i);
24         }
25     }
26     return 0;
27 }

```

Q2

main.c	Output
<pre> 6 #include <stdio.h> 7 #include <stdlib.h> 8 #include <time.h> 9 int main(){ 10 // Declare and Initialize variables 11 srand(time(NULL)); //seed random number generator 12 int num = rand() % 5 + 1; //generate random number between 1 and 5 13 14 int userGuess; //variable to store user's guess 15 int num_attempts = 0; //variable to store number of attempts 16 printf("Guess the number between 1 and 5:\n "); 17 18 //work 19 while (1){ 20 //get user's guess 21 printf("Enter your guess: "); 22 scanf("%d", &userGuess); 23 //increment number of attempts 24 num_attempts++; 25 //check if user's guess is correct 26 if (userGuess == num){ 27 //if correct, print number of attempts and break loop ending the game 28 printf("Congratulations! You guessed the correct number in %d attempts" 29 , num_attempts); 30 break; 31 } 32 else{ 33 //if incorrect, prompt user to try again 34 printf("Incorrect guess. Try again!\n"); 35 } 36 } 37 return 0; 38 } </pre>	<pre> /tmp/mKTQCGks0Z.o Guess the number between 1 and 5: Enter your guess: 1 Incorrect guess. Try again! Enter your guess: 2 Incorrect guess. Try again! Enter your guess: 3 Incorrect guess. Try again! Enter your guess: 4 Incorrect guess. Try again! Enter your guess: 5 Congratulations! You guessed the correct number in 5 attempts </pre>

Q3

```
4 // Description: takes a phone number in the format 1-555-HOLIDAY and returns
   the number with the letters replaced with "?" (1-555-??????)
5 *////////////////////////////////////
6 #include <stdio.h>
7 #include <stdlib.h>
8
9 int main(){
10     // Declare variables (test case: 1-555-HOLIDAY)
11     char phone_num[13];
12
13     // Initialize variables
14     printf(": ");
15     scanf("%s", &phone_num);
16
17     //Work
18     for (int i = 0; i < 13; i++){
19
20         if ((phone_num[i] >= '0' && phone_num[i] <= '9') || (phone_num[i] == '-')){
21             //if i is a number or a hyphen, keep it
22             phone_num[i] = phone_num[i];
23
24         } else if (toupper(phone_num[i]) >= 'A' && toupper(phone_num[i]) <= 'Z'){
25             //if i is a letter, replace it with a "?"
26             phone_num[i] = '?';
27
28         } else {
29             //if i is anything else, replace it with a null character
30             phone_num[i] = '\0';
31         }
32     }
33     printf("%s", phone_num);
34     return 0;
35 }
```

/tmp/OXiEq1wc6q.o
: 1-555-HOLIDAY
1-555-??????
/tmp/OXiEq1wc6q.o
: 999-9999
999-9999
/tmp/OXiEq1wc6q.o
: 9876zywx%\$#@
9876????