Lab 1

You are expected to copy and paste your code into each corresponding box in this handout and submit it as a Word document or PDF file before the due. Additionally, your lab instructor will tell you which three questions you must showcase during the lab session. While you may demonstrate your code running in person after the due date, your file must be submitted on time.

Task 1: To make a **program** which reads an integer from user and then print it two times

```
#include <stdio.h>

int main() {
     printf("Enter an integer: ");

     int num;
     scanf("%d", &num);

     printf("%d %d\n", num, num);

     return 0;
}
```

Task 2: To make a **program** which reads two integers from user, and then print the sum of them

```
#include <stdio.h>

int main() {
     printf("Enter two integers to add:");

     int num_1, num_2;
     scanf("%d %d", &num_1, &num_2);

     printf("%d\n", num_1 + num_2);

     return 0;
}
```

Task 3: To make a **program** which reads two chars from user, and then print them in different lines

```
#include <stdio.h>

int main() {
     printf("Enter two characters:");
     char char_1, char_2;
     scanf("%c%c", &char_1, &char_2);
     printf("%c\n%c\n", char_1, char_2);

     return 0;
}
```

Task 4: To make a **program** which reads two integers from user, and then print them with the second number first, followed by the first input with a space in between

```
#include <stdio.h>

int main() {
     printf("Enter two integers separated by space:");
     int num_1, num_2;
     scanf("%i %i", &num_1, &num_2);
     printf("%i %i\n", num_2, num_1);

     return 0;
}
```

Task 5: To make a **program** which reads two integers from user, and then print the bigger one between the two, only using basic if statements

```
#include <stdio.h>

int main() {
     printf("Enter two integers separated by space:");
     int num_1, num_2;
     scanf("%i %i", &num_1, &num_2);

     if (num_1 >= num_2) {
         printf("%i", num_1);
     }

     if (num_1 < num_2) {
         printf("%i", num_2);
     }

     return 0;
}
```

Task 6: To make a **program** which reads an integer from user, and then print “positive”, “zero” or “negative” accordingly, only using basic if statements

```
include <stdio.h>

int main() {
     printf("Enter an integer: ");

     int num_1;
     scanf("%i", &num_1);

     if (num_1 > 0) {
         printf("positive\n");
     }

     if (num_1 == 0) {
         printf("zero\n");
     }

     if (num_1 < 0) {
         printf("negative\n");
     }

     return 0;
}
```

Task 7: To make a **program** which reads two integers from user, and then print the bigger one between the two or “they are same.” accordingly, using ONE if statement

```
#include <stdio.h>

int main() {
     printf("Enter two integers separated by space: ");
     int num_1, num_2;
     scanf("%i %i", &num_1, &num_2);

     if (num_1 > num_2) {
         printf("%i\n", num_1);
     } else if (num_1 < num_2) {
         printf("%i\n", num_2);
     } else {
         printf("they are the same\n");
     }

     return 0;
}
```

Task 8: To make a **program** which reads an integer from user, and then print “positive”, “zero” or “negative” accordingly, using ONE if statement

```
#include <stdio.h>

int main() {
     printf("Enter an integer: ");
     int num_1;
     scanf("%i", &num_1);
     if (num_1 > 0) {
         printf("positive\n");
     } else if (num_1 < 0) {
         printf("negative\n");
     } else {
         printf("zero\n");
     }

     return 0;
}
```

Task 9: Write a **program** that prints the numbers 10 to 70, with 7 numbers on each line, using ONE while loop. [Hint: you will get zero if you use more than one loop]

```
#include <stdio.h>

int main() {
     int counter = 1;
     int current_num = 10;
     while (current_num <= 70) {
         printf(counter % 7 ? "%i " : "%i\n", current_num);
         ++counter;
         ++current_num;
     }
     printf("\n");

     return 0;
}
```

Task 10: make a program prints out numbers between 1 and 100: which are multiples of 2, or multiples of 3, but **NOT** multiple of 6

```
#include <stdio.h>

int is_multiple(int number, int base) {
     return !(number % base);
}

int main() {
     int counter = 1;
     while (counter <= 100) {
     if (!is_multiple(counter, 6)) {
          if (is_multiple(counter, 2)) {
               printf("%i\n", counter);
          } else if (is_multiple(counter, 3)) {
               printf("%i\n", counter);
          }
     }

     ++counter;
     }

     return 0;
}
```