Practice Problem 1

Source Code

Lab 6 > Lab report 6 > C problem1.c > main()

```c
#include <stdio.h>

int main()
{
    int n, i = 1, factorial = 1;

    printf("Enter a number: ");
    scanf("%d", &n);

    if (n < 0)
    {
        printf("Factorial is not possible.\n");
        return 1;
    }

    do
    {
        factorial *= i;
        i++;
    } while (i <= n);

    printf("%d! = %d\n", n, factorial);
    return 0;
}
```

Input & Output

```
parvej@parvej:~/Documents/CSE Lab Report$
E Lab Report/Lab 6/Lab report 6/"problem1
Enter a number: 5
5! = 120
```

```
parvej@parvej:~/Documents/CSE Lab Report/
parvej/Documents/CSE Lab Report/Lab 6/Lab
Enter a number: -2
Factorial is not possible.
```

Practice Problem 2

Source Code

Lab 6 > Lab report 6 > C problem2.c > main()

```c
#include <stdio.h>

int main() {
    int n, i, a=1, b=1, fib;

    printf("Enter the position (n): ");
    scanf("%d", &n);

    if (n == 1 || n == 2) {
        printf("Fibonacci number at position %d is 1\n", n);
        return 0;
    }

    for (i = 3; i <= n; i++) {
        fib = a + b;
        a = b;
        b = fib;
    }

    printf("Fibonacci number at position %d is %d\n", n, fib);
    return 0;
}
```

Input & Output

```
parvej@parvej:~/Documents/CSE Lab Report/
parvej/Documents/CSE Lab Report/Lab 6/Lab
Enter the position (n): 6
Fibonacci number at position 6 is 8
```

```
parvej@parvej:~/Documents/CSE Lab Report$
E Lab Report/Lab 6/Lab report 6/"problem2
Enter the position (n): 2
Fibonacci number at position 2 is 1
```

Practice Problem 3

Source Code

Lab 6 > Lab report 6 > problem3.c > main()

```c
#include <stdio.h>

int main() {
    int num, reversed = 0;

    printf("Enter a number: ");
    scanf("%d", &num);

    while (num != 0) {
        reversed = reversed * 10 + num % 10;
        num /= 10;
    }

    printf("Reversed number: %d\n", reversed);
    return 0;
}
```

Input & Output

```
parvej@parvej:~/Documents/CSE
E Lab Report/Lab 6/Lab report
Enter a number: 123
Reversed number: 321
```

Practice Problem 4

Source Code

Lab 6 > Lab report 6 > C problem4.c > main()

```c
#include <stdio.h>

int main()
{
    int n, i, isPrime = 1;

    printf("Enter an integer: ");
    scanf("%d", &n);

    if (n <= 1)
    {
        printf("%d is not a prime number.\n", n);
        return 0;
    }

    for (i = 2; i <= n / 2; i++)
    {
        if (n % i == 0)
        {
            isPrime = 0;
            break;
        }
    }

    if (isPrime)
        printf("%d is a prime number.\n", n);
    else
        printf("%d is not a prime number.\n", n);

    return 0;
}
```

Input & Output

```
parvej@parvej:~/Documents/CSE
E Lab Report/Lab 6/Lab report
Enter an integer: 97
97 is a prime number.
```

```
parvej@parvej:~/Documents/CSE
parvej/Documents/CSE Lab Repo
Enter an integer: 45
45 is not a prime number.
```