COMP500 / ENSE501: Week 12 – Exercise:

EXERCISE NAME: *4-Digit Unlock*

Using **conio.h**, and **_getch**, implement the **main** function based upon the following pseudo code:

```
START main

    SET key TO 0
    SET found to 0

    DECLARE code ARRAY DIMENSION 4

    srand(time(0))

    SET code[0] TO rand() % 10
    SET code[1] TO rand() % 10
    SET code[2] TO rand() % 10
    SET code[3] TO rand() % 10

    WHILE found < 4

        SET key TO _getch()

        key -= '0'

        IF key MATCHES code[found]

            PRINT key

            ++found

        ENDIF

    ENDWHILE

    PRINT newline
    PRINT "Unlocked!"
    PRINT newline
END
```

The program generates a secret four-digit code, which the user must then guess. When the users makes a correct guess, the program prints out the secret digit, then waits for the user to guess the next secret digit. Once all four digits have been guessed, the program prints **Unlocked!**.

Ensure the program output is exactly as described, and that the whitespace of your source code is well formatted.