

gcc program.c # Compiles program.c and generates a default executable named a.out ./a.out # Runs the compiled program
gcc program.c -o my_program # Compiles program.c and creates an executable named my_program ./my_program # Runs the compiled program
gcc program.c -o input_program # it takes inputs from input1.txt and displays the result in the terminal. ./input_program < input.txt
gcc program.c -o io_program ./io_program < input.txt > output.txt # it takes the inputs from input1.txt and creates the myoutput.txt document and writes the result here.
diff output1.txt myoutput.txt # compares the document output1.txt with the document myoutput.txt.
diff --ignore-all-space output1.txt myoutput.txt # compares the document output1.txt with the document myoutput.txt without ignoring the spaces.

QUESTION 1

Writing a C program that checks whether a given number is a **PALINDROME** / **PRIME** number. The program should determine these two properties and print a corresponding message.

- A number is a palindrome if it reads the same backward as forward. For example, 121 and 999 are palindromes, but 123 is not.
- A prime number is a natural number greater than 1 that cannot be formed by multiplying two smaller natural numbers. For example, 2, 3, 5, and 7 are prime numbers, while 4, 6, 8, and 9 are not.
- A number can be classified into one of the 4 categories.

Note: It is mandatory to use a **LOOP & SWITCH**.

<u>Input</u>	<u>Output 2</u>
121	121 is both a palindrome and a prime number
22	22 is a palindrome but not a prime number.
10	10 is neither a palindrome nor a prime number
13	13 is a prime number but not a palindrome